Issue 130
PS
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
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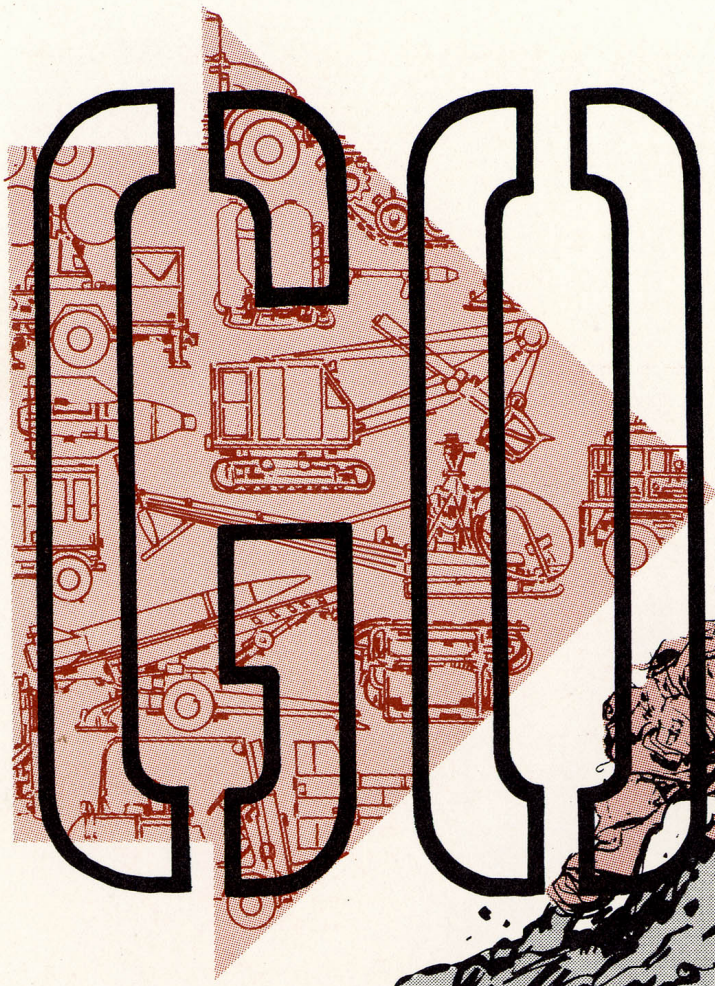
TITLE: SMALL ARMS NEED YOUR CLOSE ATTENTION
INSTRUCTOR: M/SGT HALF-MAST
ASSISTED BY CONNIE RODD
SPECIAL FEATURE
YOUR M73 MACHINE GUN
SEE PAGE 2
WILL EISNER

GO WITH WHAT YOU'VE GOT



We have to be ready to go at any time with what we have.

This is an old story, but it needs constant emphasis because too many people refuse to believe it.

We need to strengthen our maintenance system from the user level on back. No increase in budget, no change in organization, and no other change that I can think of is going to ease the maintenance burden.

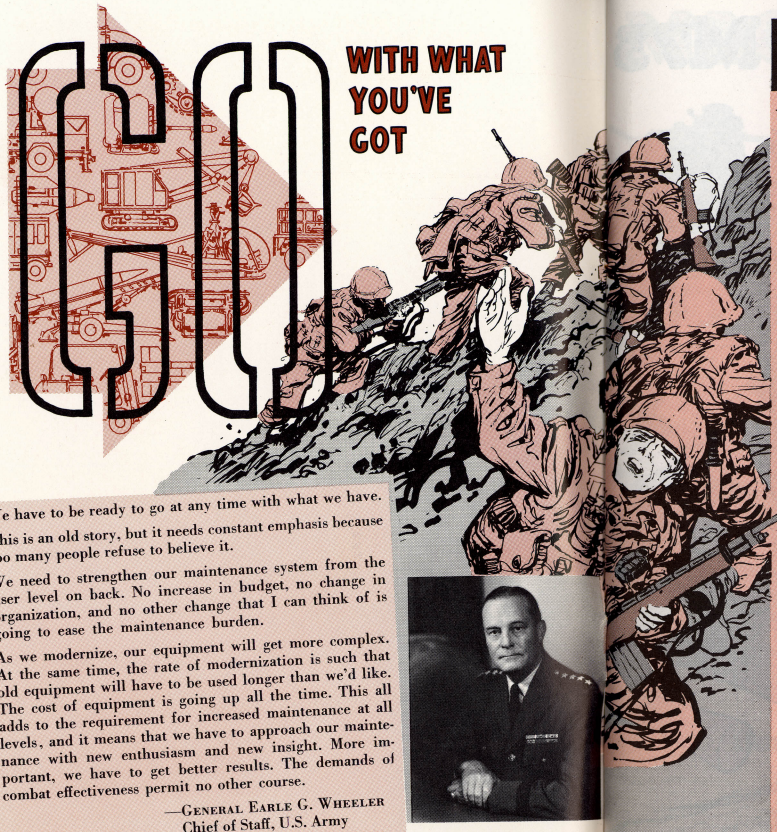
As we modernize, our equipment will get more complex. At the same time, the rate of modernization is such that old equipment will have to be used longer than we'd like. The cost of equipment is going up all the time. This all adds to the requirement for increased maintenance at all levels, and it means that we have to approach our maintenance with new enthusiasm and new insight. More important, we have to get better results. The demands of combat effectiveness permit no other course.

—General Earle G. Wheeler
Chief of Staff, U.S. Army

KEEP IT READY!

PS

WITH WHAT YOU'VE GOT



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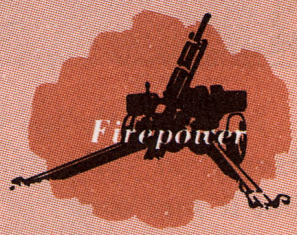

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FIREPOWER

BE YOUR OWN INSPECTOR ON THE... M73

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Yessir—the co-axial, 7.62-mm M73 machine gun's a real Swinging Richard when it comes to chopping up the opposition or picking off troublemakers.

But get sloppy with your PM habits and when you need it most the only thing you'll be chopping is your gums.

Here's a trouble-shooting Be-Your-Own-Inspector guide that'll pave the way to giving you instant firepower at the touch of a button.

Those items in **bold type** are the ones that rate on-the-double attention. But all the points should be given a careful eye-balling. Take care of all the items in your echelon and get on the horn for support action on the rest.

Among the main defects to look for are rust, improper lubrication (check that LO decal regularly), wrong assembly, dirt, grease and pitting.

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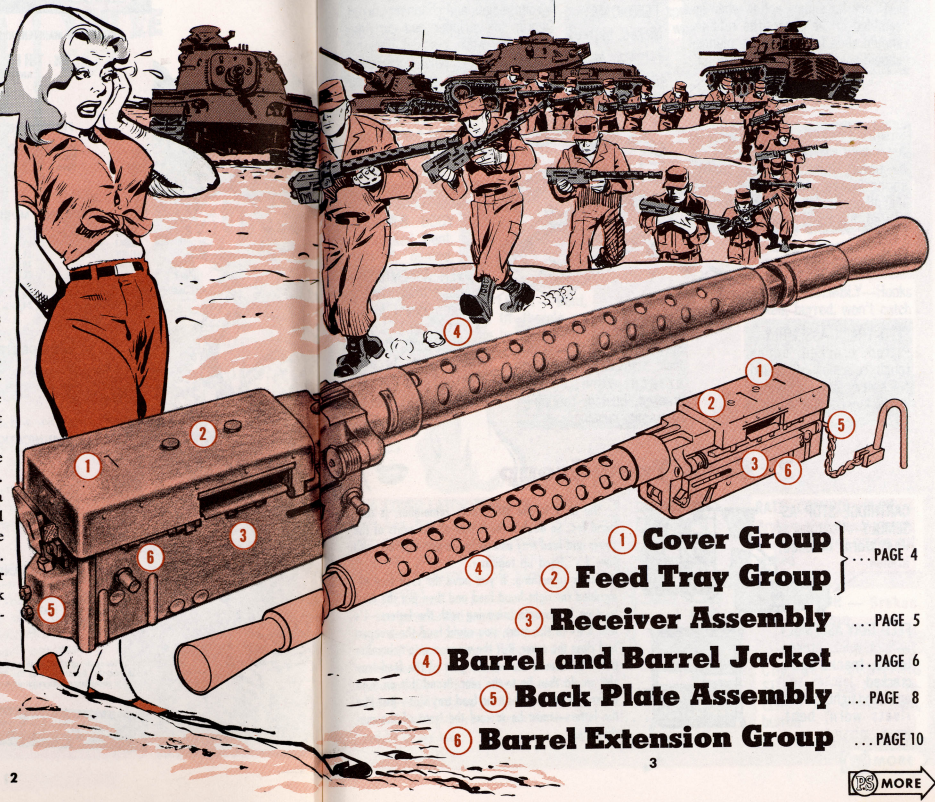

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MACHINE GUN

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P.S. MORE

1. Cover Group

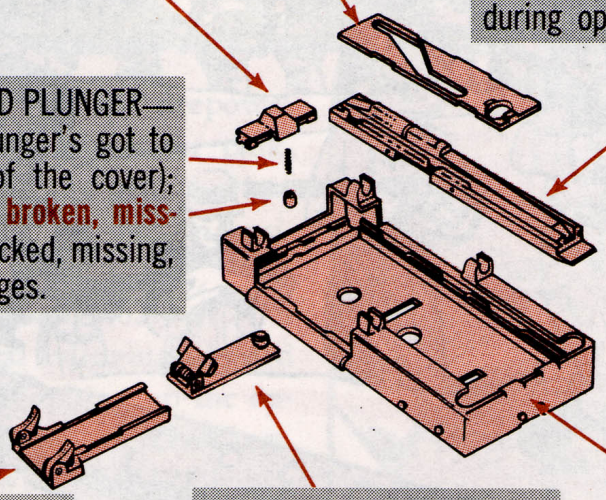
RETAINER—Burred, cracked, edges rough, worn, busted, missing.

Check for sliding action when assembled in the cover. The retainer should slide freely, but the plunger should hold it in the center position.

FEED CAM — Nicked, burred, **cracked,** worn.

FEED SUPPORT ASSEMBLY—Bent, deformed, does not fit in cover group; edges and channels burred, worn; link stripper and cartridge depressor worn, cracked, does not function right; pins worn, bent, busted, interfere with feed cam during operation.

RETAINER SPRING AND PLUNGER—Assembled wrong (plunger's got to be toward the top of the cover); spring kinked, weak, **broken, missing;** plunger worn, cracked, missing, dented, has rough edges.



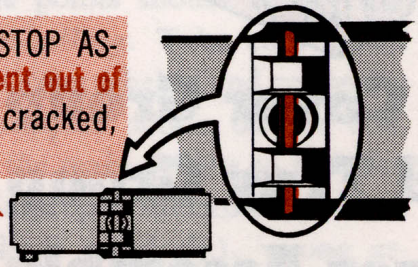
COVER ASSEMBLY — **Retainer bracket welds broken;** cover loose, **rivets split;** cover latches bent, broken; feed cam locator spring busted, deformed.

FEED TRACK ASSEMBLY—Pitted, cracked, edges rough; retaining pawls and track worn, broken; springs weak, kinked, **busted.**

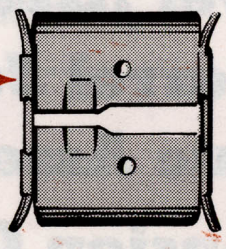
FEED SLIDE ASSEMBLY — Spring weak, worn, **broken, lacks tension; feed pawl broken,** worn; roller cracked, busted; retaining ring split, **missing.**

2. Feed Tray Group

CARTRIDGE STOP ASSEMBLY—**Bent out of line,** worn, cracked, **broken.**



FEED TRAY ASSEMBLY —**Spot welds broken,** loose; tracks split, cracked; **latches split open,** too tight, burred; **rivets** worn, bent, **loose, missing.**



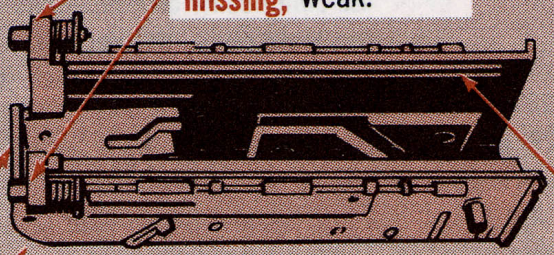
The M73 in the M60 tank, remember, is left-hand fed. So double check that all the parts of the cover and feed tray assembly are put together with the "L's" lined up together.

Here's something: If you have the feed tray assembled for right-hand feed and then put the feed tray on backwards (meaning with the letters—L's and R's—to the rear), you could load the weapon and close the cover, BUT the weapon won't chamber and fire because the w-i-d-e part of the feed tray slot would then be to the rear. Brand this on your brain: The wide part of the feed tray slot—just like the letters—must be toward the front of the machine gun.

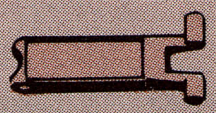
3. Receiver Assembly

RATE CONTROL PAWL TRIP — **Busted, missing, loose.**

DISCONNECTORS — **Broken, cracked, bent,** burred; springs worn, **missing,** weak.



BREECHBLOCK CAM — Broken, cracked, burred; breechblock plunger or spring busted, **missing.**



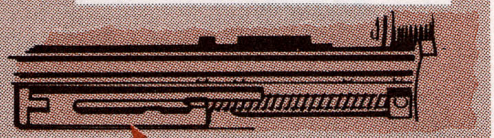
BREECH OPENING AND CLOSING CAMS — **Broken,** cracked, **burred,** worn, loose.

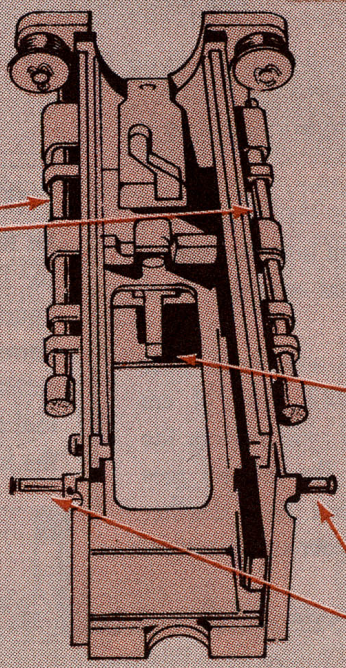
RECEIVER BODY —**Cracked.** bent, twisted, dented, **busted.**

BUFFER SUPPORT LEVER — Bent, no spring action (if there's no spring action, the buffer support won't be held in the upper position).

BUFFER ASSEMBLY—Hooks broken, burred, won't catch on lugs of barrel extension. (If it needs adjusting, notify higher echelon.)

PIVOT PIN — Broken, bent, worn, burred.





COVER LATCH RODS—**Broken,** bent; cover latch rod springs weak (they're coiled and you can't see 'em); flat, leaf-type spring bent, busted.

RATE CONTROL SLIDE — **Broken, binds; spring weak, broken;** housing screws not staked.

EJECTOR — **Broken, bent,** loose.

CHARGER MOUNTING STUDS—**Broken, bent;** retaining lug groove worn, burred.

You gotta be real careful not to damage the cover latches. Keep the rods forward when opening or removing the cover from the gun. These rods should automatically latch the cover when it's closed. You'll bang up the latches if you keep slamming the cover shut while the rods're to the rear.

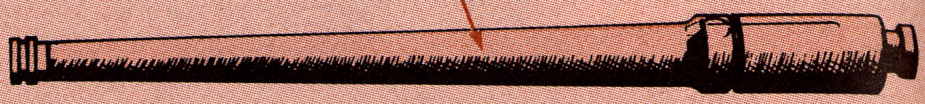
PS MORE

4. Barrel and

A word to the wise: Never clean the rings on the muzzle end of the barrel with an abrasive like crocus cloth, emery cloth, steel wool or the like. This'd ruin the self-cleaning action of the cutting edges on the rings. When you want to clean 'em, use bore cleaner and rags—and nothing else, hear? And protect those rings—no dragging or bumping—they have to be almost razor-sharp to do their job.

Now hear this: Flash hider 7792830, booster 7792872 and barrel bearing 7792829, all of which are applied through MWO 9-1005-233-30/1 (8 Apr 63) are **not interchangeable** with the parts they replace.

BARREL ASSEMBLY—**Bulged,** burred, corroded, bore pitted, loaded with carbon (remember, the outside finish must be dark and have no shine).



FLASH HIDER — Cracked, burred, edges sharp, corroded, loaded with carbon.

FRONT BARREL BEARING — Burred, corroded, **loose.**

BOOSTER — Rusty, stuck, cracked, nicked, burred, **missing,** carbon build-up.

BARREL BEARING LOCK — Loose, **not staked to bearing and barrel jacket.**

FLASH HIDER RETAINER— **Sprung,** busted, **missing,** will not lock flash hider in place.

Watch this baby. If you lose the flash hider, you'll lose the booster, and if you lose the booster you'll wind up with a single shot weapon 'stead of a machine gun.

And here's something else: A **new** flash hider 7792824 and retainer lock 7792825, both of 'em components of the -30/1 MWO, will replace the older type flash hider retainer. The retainer gets locked in place by this retainer lock. Now, if either of these new items is NG, notify your support guys.

There's a handy scraper tool in your kit that'll fight carbon three ways, like so: 1) using the small end to clean the booster; 2) the big end to clean the barrel bearing; 3) the notch with the cutting surface near the center of the tool for cleaning the grooved recess on the front barrel bearing.

4. Barrel and Barrel Jacket

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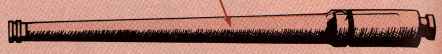

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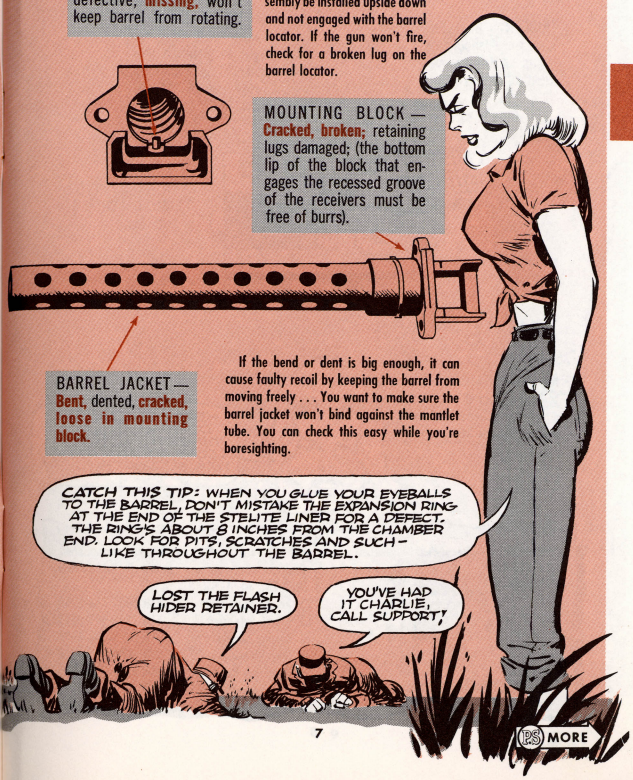
BARREL LOCATOR—Busted, defective, **missing,** won't keep barrel from rotating.

First production models of the M73 have a spring-activated locator that'll let the barrel assembly be installed upside down and not engaged with the barrel locator. If the gun won't fire, check for a broken lug on the barrel locator.

MOUNTING BLOCK — **Cracked, broken;** retaining lugs damaged; (the bottom lip of the block that engages the recessed groove of the receivers must be free of burrs).

BARREL JACKET — **Bent,** dented, **cracked, loose in mounting block.**

If the bend or dent is big enough, it can cause faulty recoil by keeping the barrel from moving freely . . . You want to make sure the barrel jacket won't bind against the mantlet tube. You can check this easy while you're boresighting.



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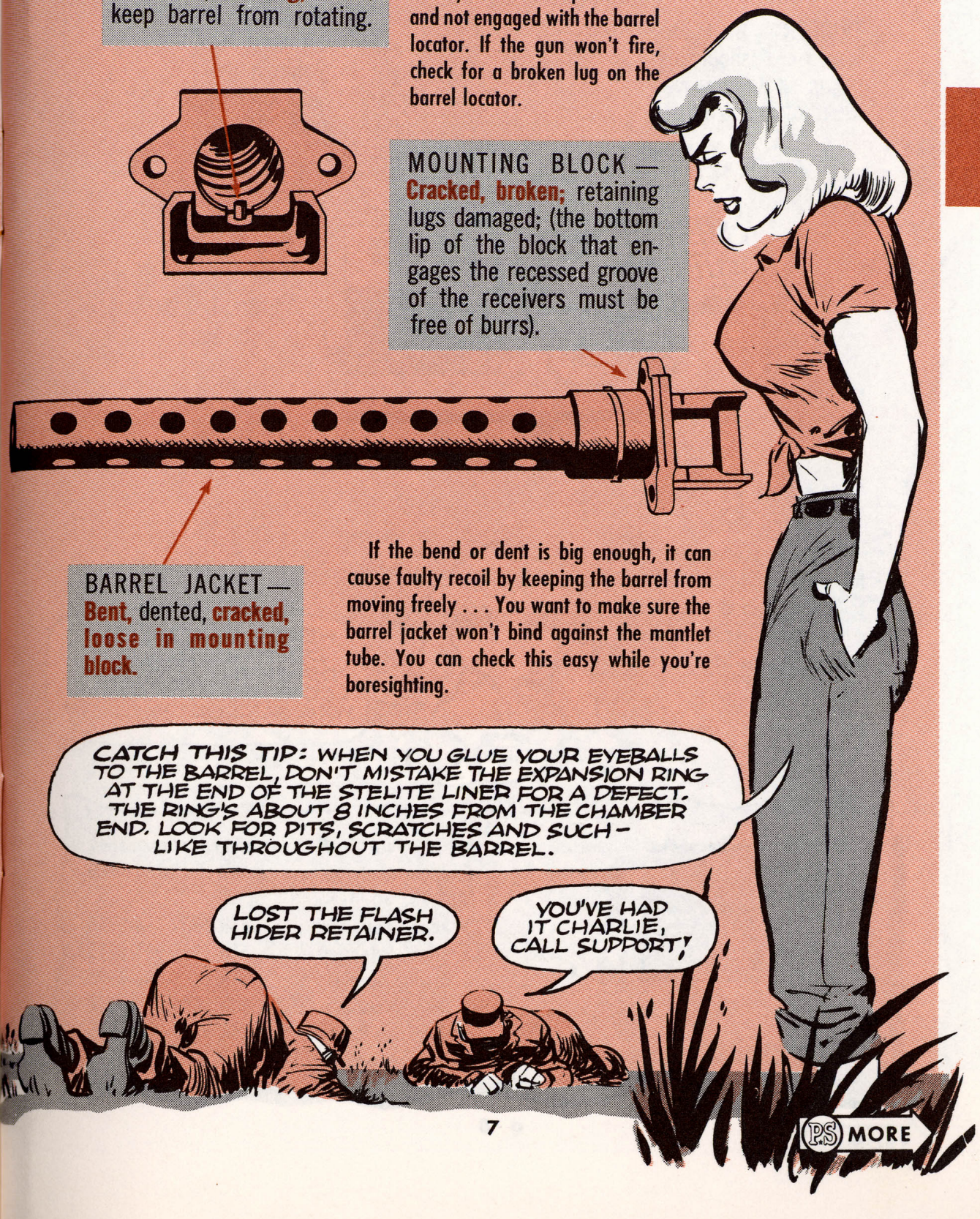


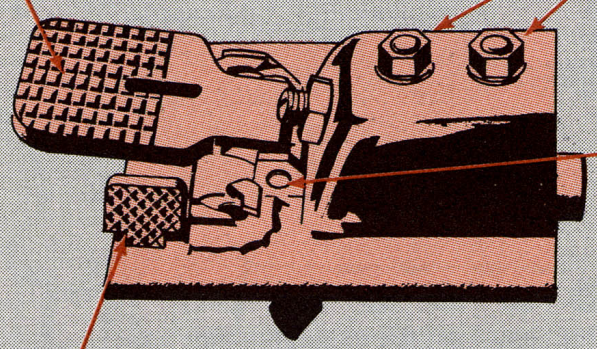
PS MORE

4. Back Plate

If anything shows up gaflooey on these components, remember, you're not authorized to take 'em apart and make adjustments. This is a job for higher echelon.

TRIGGER — **Bent, broken, worn** (should be no up or down movement of the trigger).

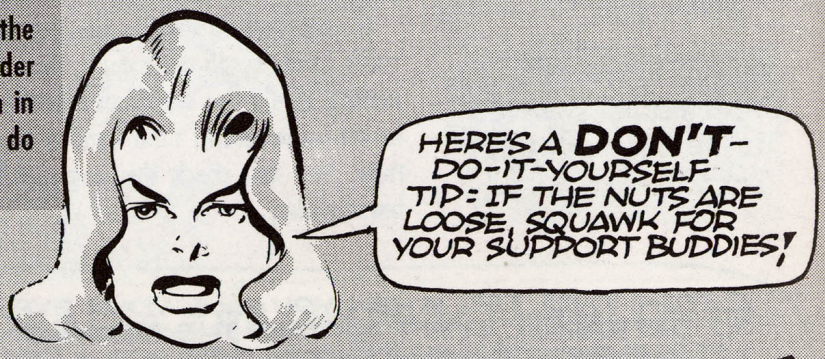
SOLENOID NUTS— **Loose** (they must be tight to maintain the solenoid adjustment); **lockwashers broken, missing.**

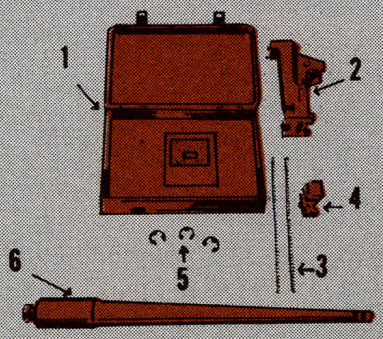


TRIGGER PIVOT PIN—**Not flared at both ends.**

SAFETY—**Worn, cracked, broken.**

The safety must keep the trigger sear in position in order to hold the barrel extension in a cocked position. If it won't do that, get on the horn.





REPAIR PARTS—Missing, broken, wrong ones. Compare what you have against the list in MWO 9-1005-233-30/1:

1	Repair Parts Box	FSN 1005-714-5250
2	Barrel Extension	FSN 1005-991-0215
3	Driving Springs	FSN 1005-856-7995
4	Breechblock	FSN 1005-690-0318
5	Retaining Rings	FSN 5340-209-6975
6	Barrel Assembly	FSN 1005-972-0196

4. Back Plate Assembly

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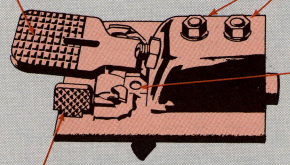
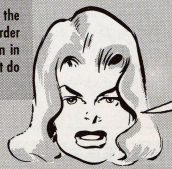


TRIGGER PIVOT PIN — **Not flared at both ends.**

SAFETY — **Worn, cracked, broken.**

The safety must keep the trigger sear in position in order to hold the barrel extension in a cocked position. If it won't do that, get on the horn.



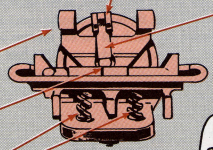
SOLENOID YOKE — Bent, **cracked.**

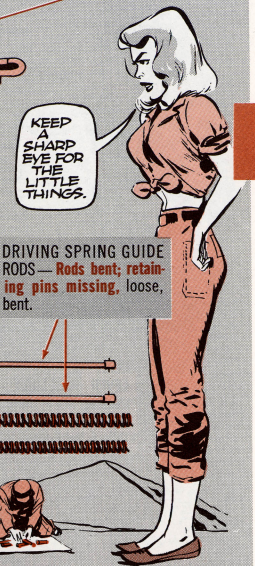
SOLENOID LEVER — **Cracked,** burred, binds.

SOLENOID — **Cracked,** loose.

TRIGGER SEAR — **Broken, burred, worn.**

SOLENOID PLUNGER — Worn, **won't go up and down like it should.**





TRIGGER SPRINGS — **Broken,** weak (don't have enough force to return the trigger and trigger sear to original position).

SAFETY SPRING — **Won't keep safety in either position.**

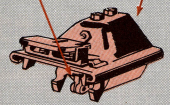
BACK PLATE — **Bent, cracked, broken.**

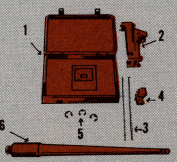
The guide grooves shouldn't be bent 'cause they have to fit snugly.

DRIVING SPRING GUIDE RODS — **Rods bent; retaining pins missing,** loose, bent.

SOLENOID LEVER PIN — **Not staked at both ends.**

SPRINGS — Kinked, weak, **lost, broken.**



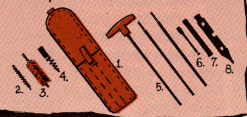


REPAIR PARTS—Missing, broken, wrong ones. Compare what you have against the list in MWO 9-1005-233-30/1:

1	Repair Parts Box	FSN 1005-714-5250
2	Barrel Extension	FSN 1005-991-0215
3	Driving Springs	FSN 1005-856-7995
4	Breechblock	FSN 1005-690-0318
5	Retaining Rings	FSN 5340-209-6975
6	Barrel Assembly	FSN 1005-972-0196

TOOLS—Missing, broken, wrong ones. Check what you have against what the BIII. on page 475 of TM 9-2350-215-10 says you should have:

1	Cleaning Rod Case	FSN 1005-550-6573
2	Bore Brush	FSN 1005-556-4174
3	Receiver Brush	FSN 1005-650-4508
4	Chamber Brush	FSN 1005-690-3115
5	Cleaning Rod	FSN 1005-650-8237
6	Ruptured Case Extractor	FSN 4933-652-9950
7	Combination Tool	FSN 1005-733-4759
8	Carbon Scraper	FSN 1005-722-3846



MORE

Assembly

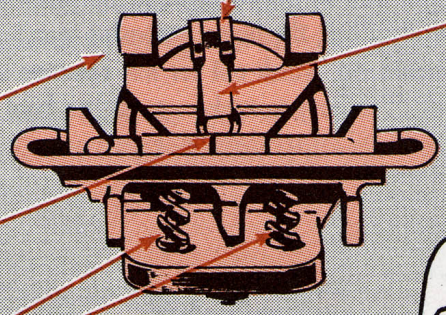
SOLENOID YOKE — Bent, **cracked.**

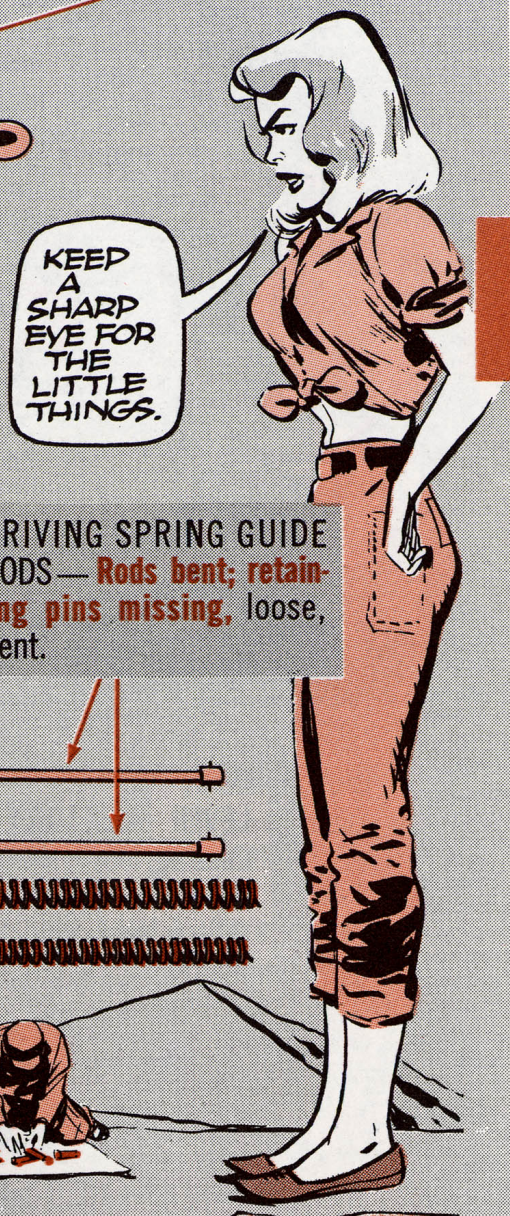
SOLENOID LEVER — **Cracked,** burred, binds.

SOLENOID — **Cracked,** loose.

TRIGGER SEAR — **Broken, burred, worn.**

SOLENOID PLUNGER — Worn, **won't go up and down like it should.**





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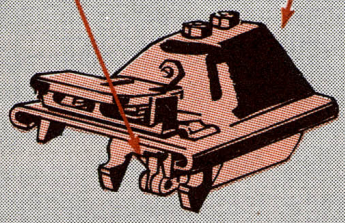

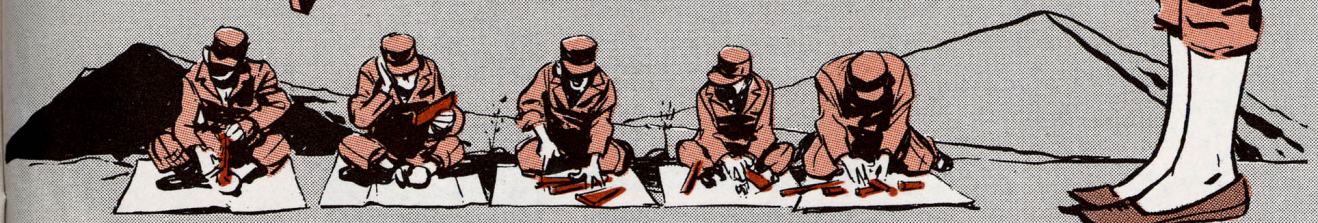

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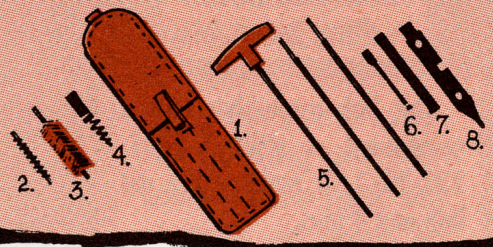
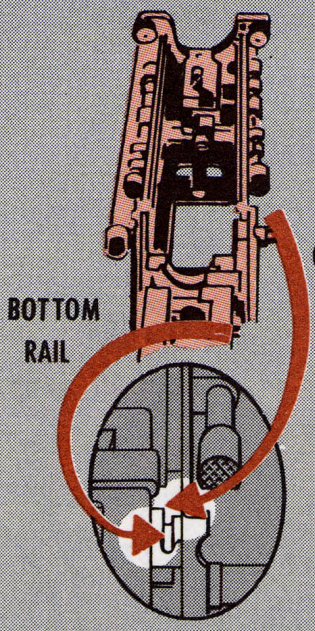
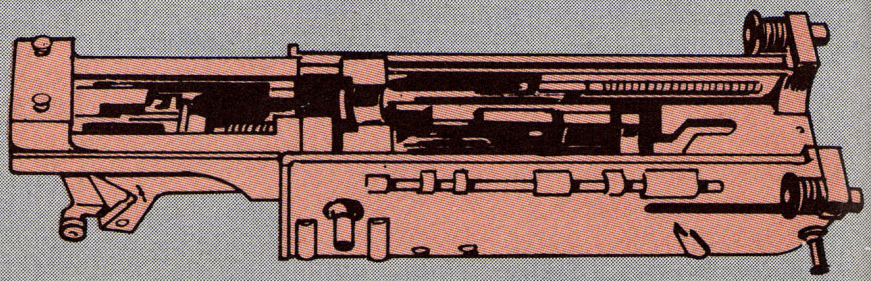


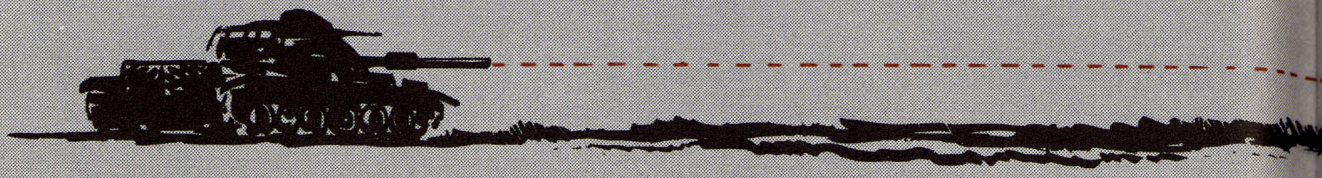
PS MORE

5. Barrel Extension

The groove of the breechblock must engage the bottom rail on the right side of the receiver. If the breechblock's not engaged to the receiver rail, the barrel extension won't go fully forward the way it should. So, watch out for this common error in installing. The mistake's so easy to make . . . and so hard to correct later on.

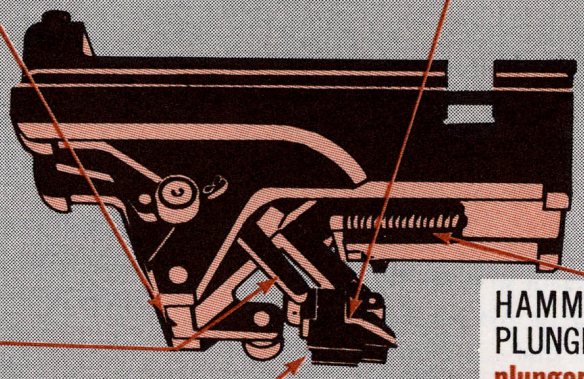






LEVER ASSEMBLY — Pin missing, loose; shafts twisted, worn, **cracked, broken;** rollers tight, binding.

CARTRIDGE CARRIER—**Excessive binding;** extractor camming projections broken, burred, worn.



LINK ASSEMBLY —**Pins loose.**

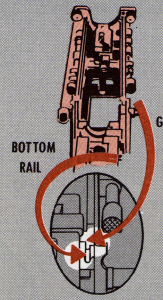
This link assembly's also a component of MWO 9-1005-233-30/1. It replaces the old link and 4 pins.

GRIPS — **Broken, cracked,** worn.

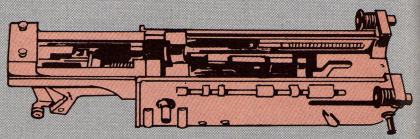
HAMMER SPRING AND PLUNGER—**Spring missing; plunger broken, split.**

SPRINGS — **Don't give enough tension to the grips.**

5. Barrel Extension Group



The groove of the breechblock must engage the bottom rail on the right side of the receiver. If the breechblock's not engaged to the receiver rail, the barrel extension won't go fully forward the way it should. So, watch out for this common error in installing. The mistake's so easy to make . . . and so hard to correct later on.

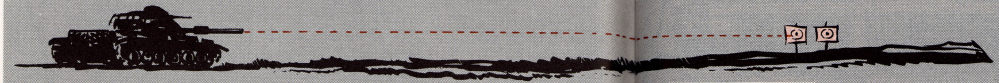


Keep this in mind: The barrel extension group must be forward when you install the jacket assembly with flash hider group to the receiver. If it's not forward, the barrel just won't engage the barrel extension.

Also: The new barrel extension assembly MUST be used in all weapons modified according to MWO 9-1005-233-30/1. But, get this, don't try to swap assemblies between modified and unmodified weapons!

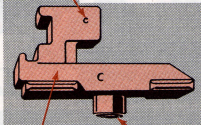
Here's why: If you use an old barrel extension with a new booster, the extension'll be damaged because of the increase in the recoil force. And if you use a modified or a new barrel extension without the new booster, you'll create the very same problems you had with the unmodified weapon.

So-o-o, get 'em straight by checking the stock numbers. The old barrel extension assembly took FSN 1005-690-0324; the new one takes FSN 1005-991-0215.



FIRING PIN—**Broken,** worn; **wings broken, cracked, worn.**

FIRING PIN SPRING—**Broken, weak** (won't pull firing pin from face of breechblock).

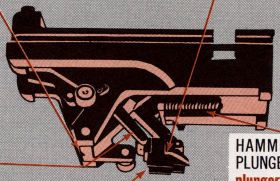


BREECHBLOCK—Burred, cracked, broken.

BREECHBLOCK ROLLER — **Missing,** stuck (won't rotate).

LEVER ASSEMBLY — Pin missing, loose; shafts twisted, worn, **cracked, broken;** rollers tight, binding.

CARTRIDGE CARRIER—**Excessive binding;** extractor camming projections broken, burred, worn.



LINK ASSEMBLY —**Pins loose.**

This link assembly's also a component of MWO 9-1005-233-30/1. It replaces the old link and 4 pins.

GRIPS — **Broken, cracked,** worn.

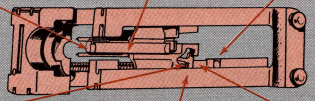
HAMMER SPRING AND PLUNGER—**Spring missing; plunger broken, split.**

SPRINGS — **Don't give enough tension to the grips.**

EXTRACTOR — **Lip broken, worn,** burred; spring weak, binds too much (won't return extractor to original position).

RAMMER — **Broken, bent,** burred.

HAMMER SEAR—**Broken, worn.**



DRIVING STUDS — **Broken,** cracked, won't work; spring missing, broken.

BARREL EXTENSION — **Broken,** deformed, worn, cracked.

FIRING PIN EXTENSION SPRING—**Missing, kinked, weak** (won't return extension to original position).

FIRING PIN EXTENSION—**Broken, deformed, assembled wrong.** If it's backwards, the firing pin extension'll stick out of the front end of the rammer assembly.

HAMMER ASSEMBLY—**Components worn, cracked, broken, missing.** (The retaining pin screw could vibrate right out of there, so watch it!)

SEAR SPRING—Won't work (should return sear to forward position).

MORE

Group

Keep this in mind: The barrel extension group **must be forward** when you install the jacket assembly with flash hider group to the receiver. If it's not forward, the barrel just won't engage the barrel extension.

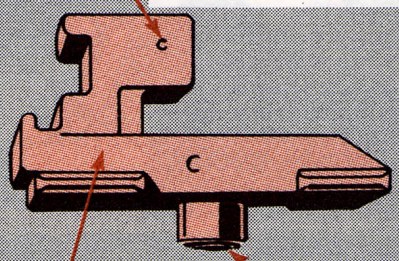
Also: The new barrel extension assembly MUST be used in all weapons modified according to MWO 9-1005-233-30/1. But, get this, don't try to swap assemblies between modified and unmodified weapons!

Here's why: If you use an old barrel extension with a new booster, the extension'll be damaged because of the increase in the recoil force. And if you use a modified or a new barrel extension without the new booster, you'll create the very same problems you had with the unmodified weapon.

So-o-o, get 'em straight by checking the stock numbers. The old barrel extension assembly took FSN 1005-690-0324; the new one takes FSN 1005-991-0215.

FIRING PIN—**Broken,** worn; **wings broken, cracked, worn.**

FIRING PIN SPRING—**Broken, weak** (won't pull firing pin from face of breechblock).



BREECHBLOCK—Burred, cracked, broken.

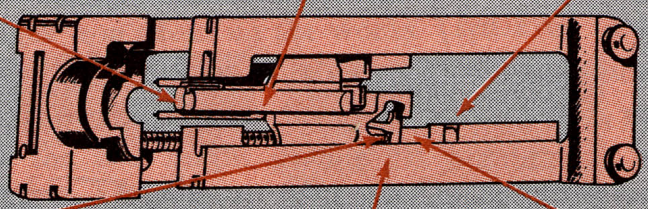
BREECHBLOCK ROLLER — **Missing,** stuck (won't rotate).

EXTRACTOR — **Lip broken, worn,** burred; spring weak, binds too much (won't return extractor to original position).

RAMMER — **Broken, bent,** burred.

HAMMER SEAR—**Broken, worn.**

DRIVING STUDS—**Broken,** cracked, won't work; spring missing, broken.



BARREL EXTENSION — **Broken,** deformed, worn, cracked.

FIRING PIN EXTENSION SPRING—**Missing, kinked, weak** (won't return extension to original position).

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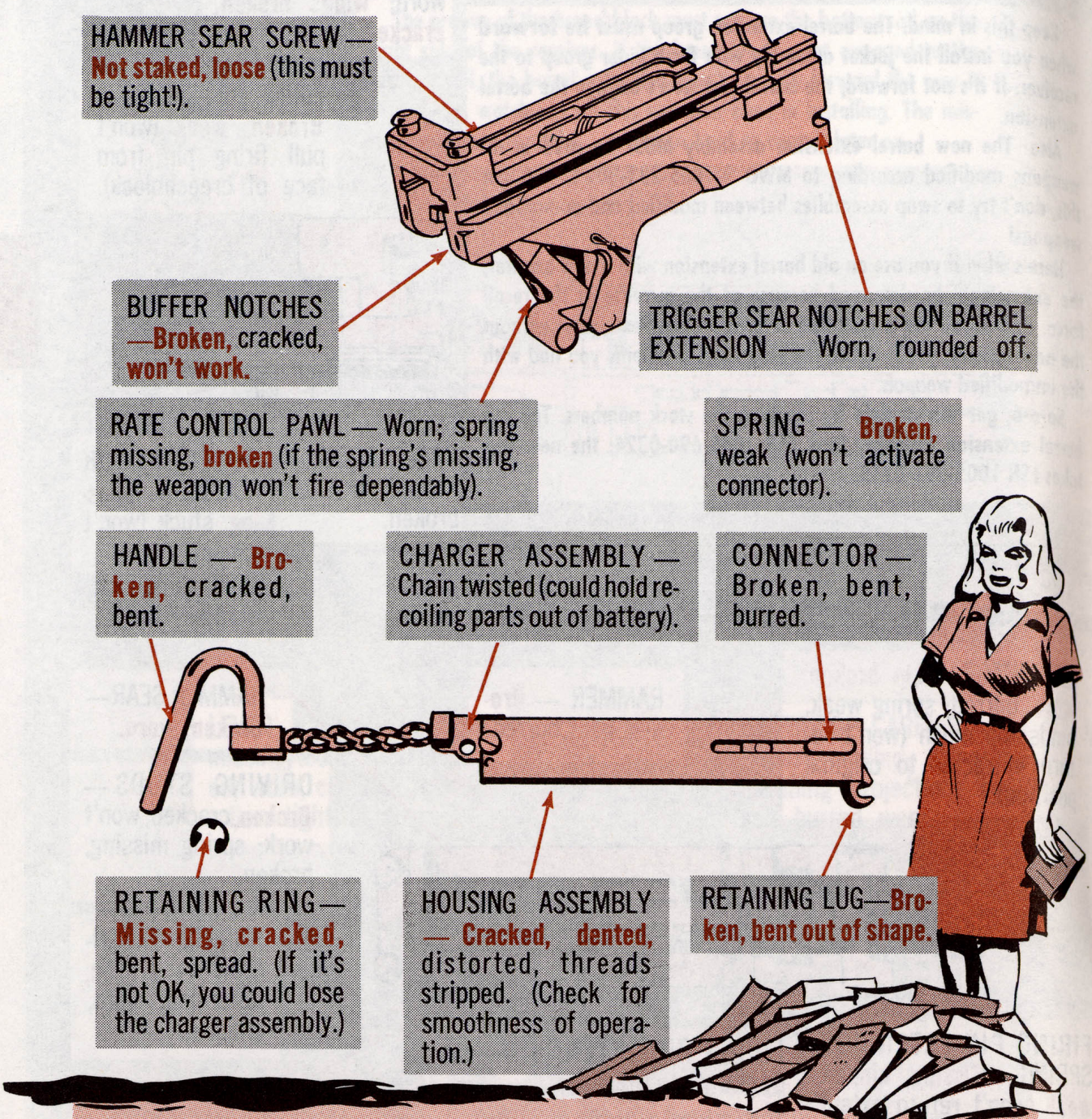
HAMMER ASSEMBLY—**Components worn, cracked, broken, missing.** (The retaining pin screw could vibrate right out of there, so watch it!)

SEAR SPRING—Won't work (should return sear to forward position).

P.S. MORE

Barrel Extension Group

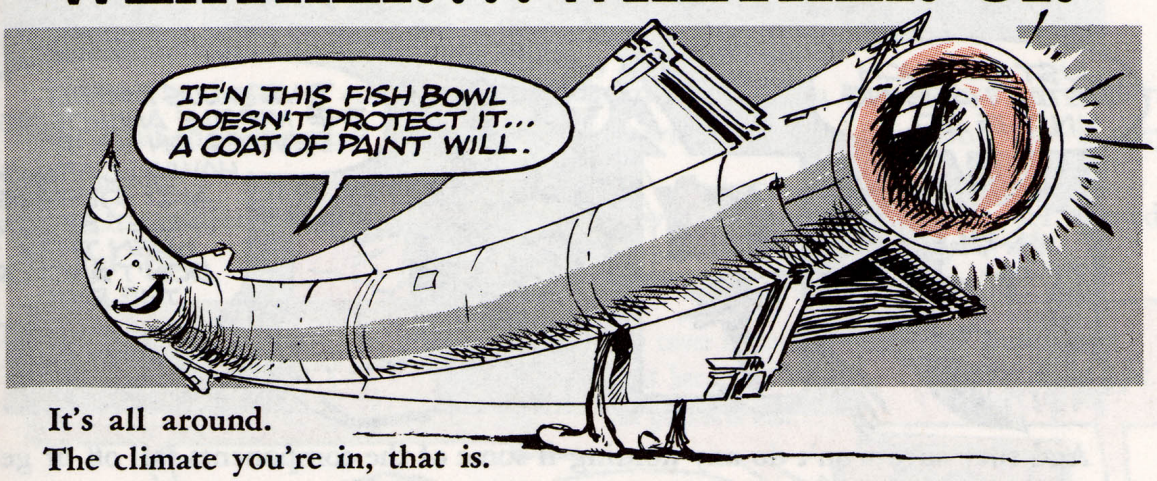


PUBLICATIONS — Missing, torn, unreadable, wrong ones. (These are the ones you should have: TM 9-2350-215-10, Sep 62; TM 9-2350-215-20, Oct 62; TM 9-2350-215-20P, Nov 62; TM 9-1005-233-34, Apr 60; LO 9-1005-233-10, Jul 61; TC 17-11, 1962 and TB 9-1005-233-30, 29 Mar 63.)

MWO'S—Not applied, not recorded in log book. (These're the ones your M73 should have: MWO 9-1005-223-50/1, 15 May 62 and MWO 9-1005-233-30/1, 8 Apr 63.)

You ought to know this: Both the new TB and MWO deal with removing the tip from the carbon scraper. Make sure you get your support guys to remove the tip in order to insure proper cleaning of the new booster.

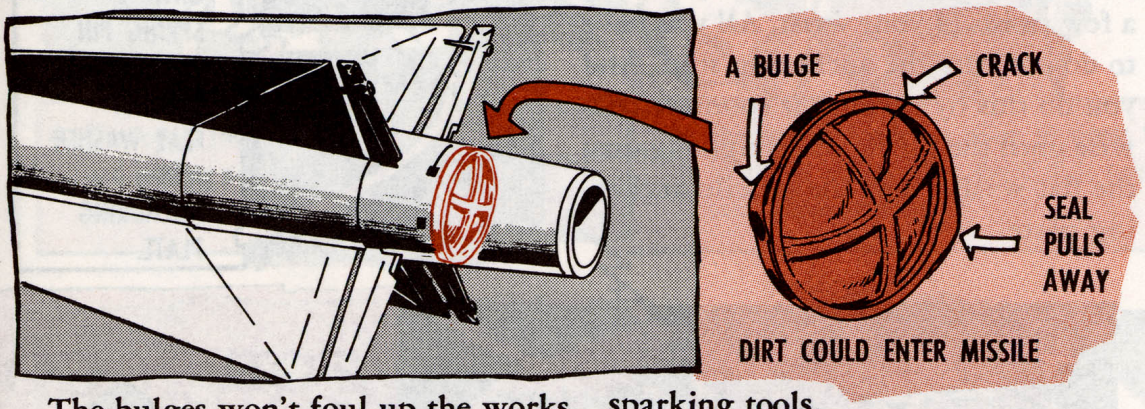
WEATHER . . . WHETHER OR –



It's all around.

The climate you're in, that is.

And the climate can really do things to the blast tube nozzle closure on your Nike-Hercules missile. Like maybe the closure'll bulge in toward the sustainer motor . . . out away from it . . . or in both directions on different parts of the closure.



The bulges won't foul up the works none, but what they lead to might.

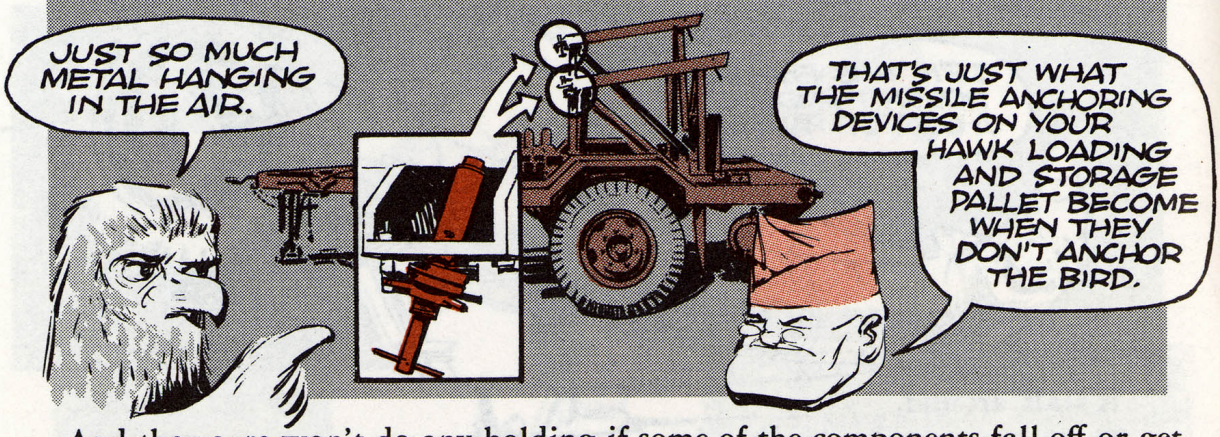
You could end up with cracks in the closure or the seal might pull loose from around it. Maybe both troubles'll hit the closure at the same time.

A crack or loose seal opens the way for moisture, dirt and what have you to get inside the missile. And that doesn't do the sustainer motor any good.

So anytime you have to dejoin the missile and booster take a good look at the closure. If there's even a hint of a crack in the closure or loose seal around it, the time to replace the closure is then —in the revetted area and with non-sparking tools.

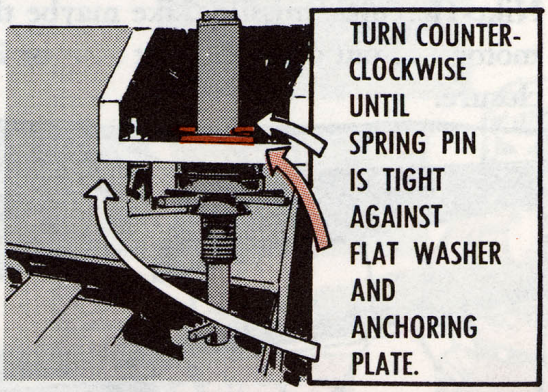
The chances are that when you check the closure, you'll find it's in good shape and doesn't need replacing. While the missile and booster cluster are dejointed, tho, take a squint at the color of the paint on the aft surface of the closure. If the white has changed to a color ranging from light tan to yellow, it's a safe bet that the pigment has become "tired".

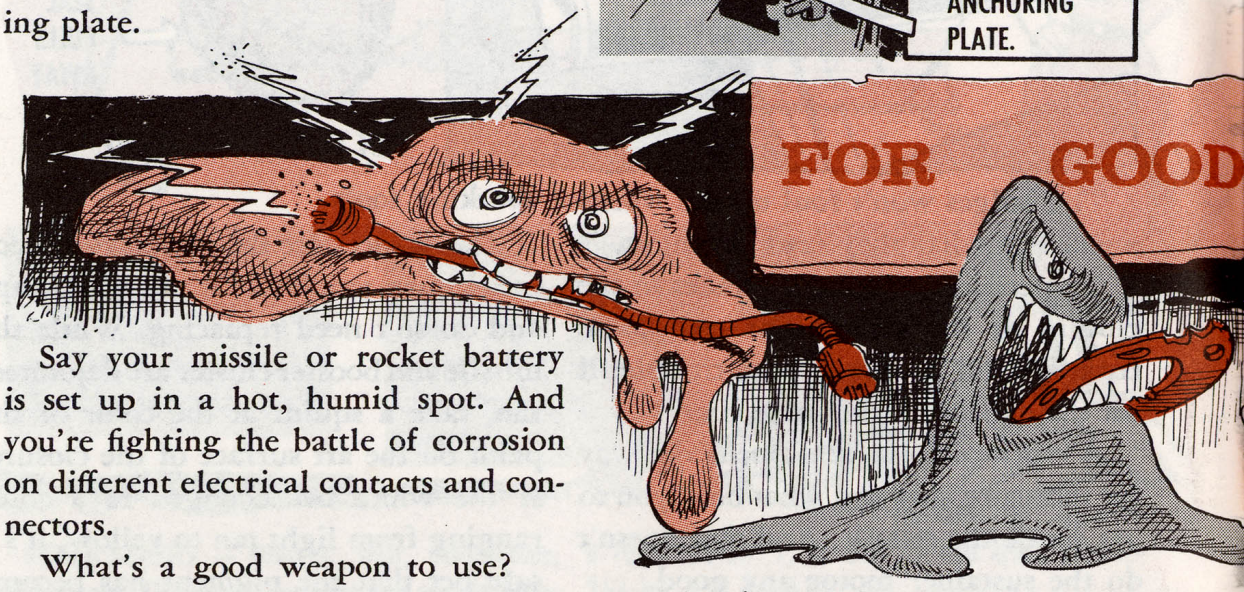
MAKE IT SECURE



And they sure won't do any holding if some of the components fall off or get battered while you're moving the pallet around without any missiles on it.

You can call a quick halt to losing parts or having them get beat up when you don't have missiles on the pallet by a few twists of your wrist. All you have to do is secure the anchoring stud. And you do this by turning it counterclockwise until the spring pin is tight against the flat washer and the missile anchoring plate.





Say your missile or rocket battery is set up in a hot, humid spot. And you're fighting the battle of corrosion on different electrical contacts and connectors.

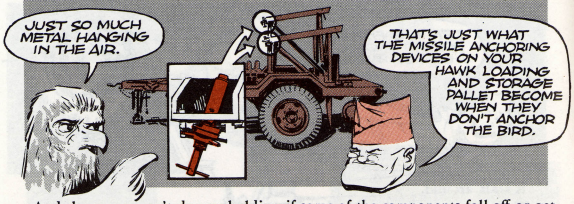
What's a good weapon to use?

While you're thinking about that one, maybe you can come up with a quick answer on what not to use.

You're right—if you say you steer clear of electrical insulating compound (DC-4). And that means you don't even let the contacts or connectors get a sniff of the stuff.

The compound gets contaminated when the air hits it. And when it gets "dirty", it goes from being a non-conductor to a conductor.

MAKE IT SECURE



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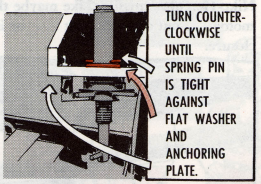
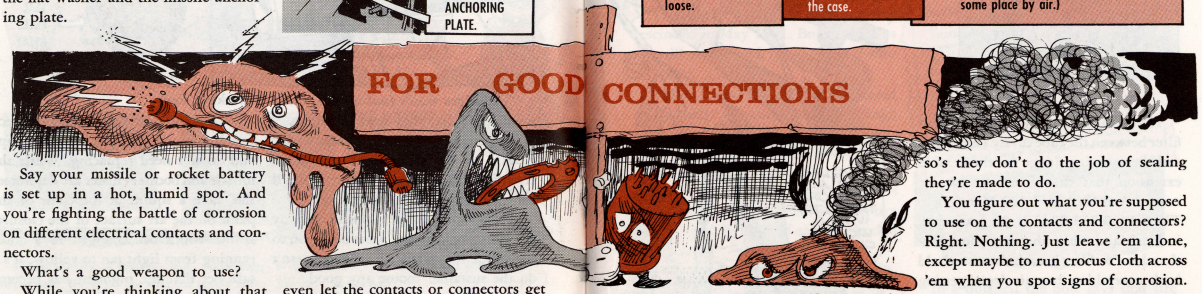


FOR GOOD CONNECTIONS



Say your missile or rocket battery is set up in a hot, humid spot. And you're fighting the battle of corrosion on different electrical contacts and connectors.

What's a good weapon to use?

While you're thinking about that one, maybe you can come up with a quick answer on what not to use.

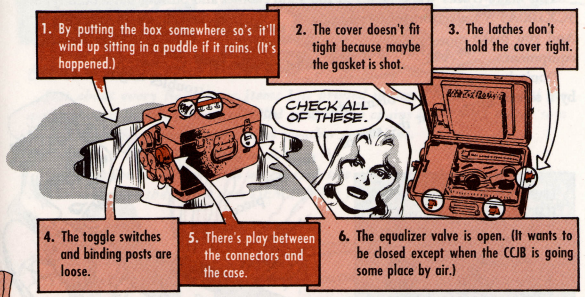
You're right—if you say you steer clear of electrical insulating compound (DC-4). And that means you don't even let the contacts or connectors get a sniff of the stuff.

The compound gets contaminated when the air hits it. And when it gets "dirty", it goes from being a non-conductor to a conductor.

IT BELONGS OUTSIDE

Water or beads of condensation. No matter how you look at 'em . . . both're wet. And they can play hob with your Hawk crew chief junction box—if they get inside.

It can happen about a half-dozen ways—even with the cover closed. Count 'em.



Another thing . . . if any arcing reaches the compound, the stuff is liable to change into a bunch of flames.

That's not all. The compound messes up things like rubber and plastic grommets and gaskets and what have you so's they don't do the job of sealing they're made to do.

You figure out what you're supposed to use on the contacts and connectors? Right. Nothing. Just leave 'em alone, except maybe to run crocus cloth across 'em when you spot signs of corrosion.

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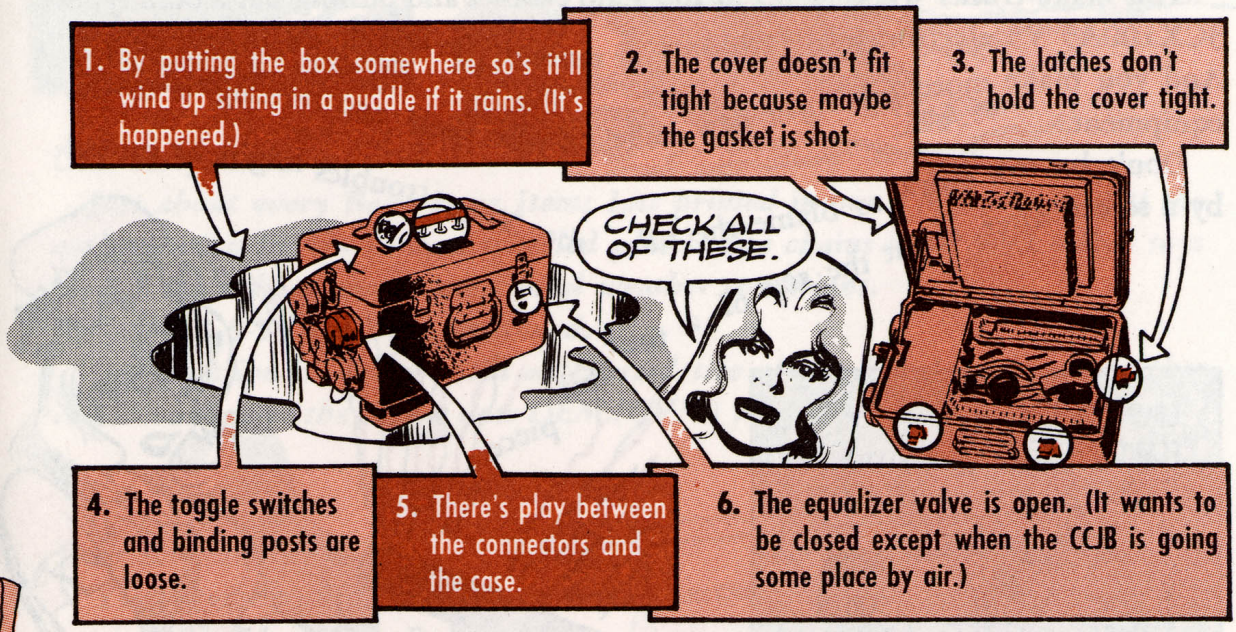
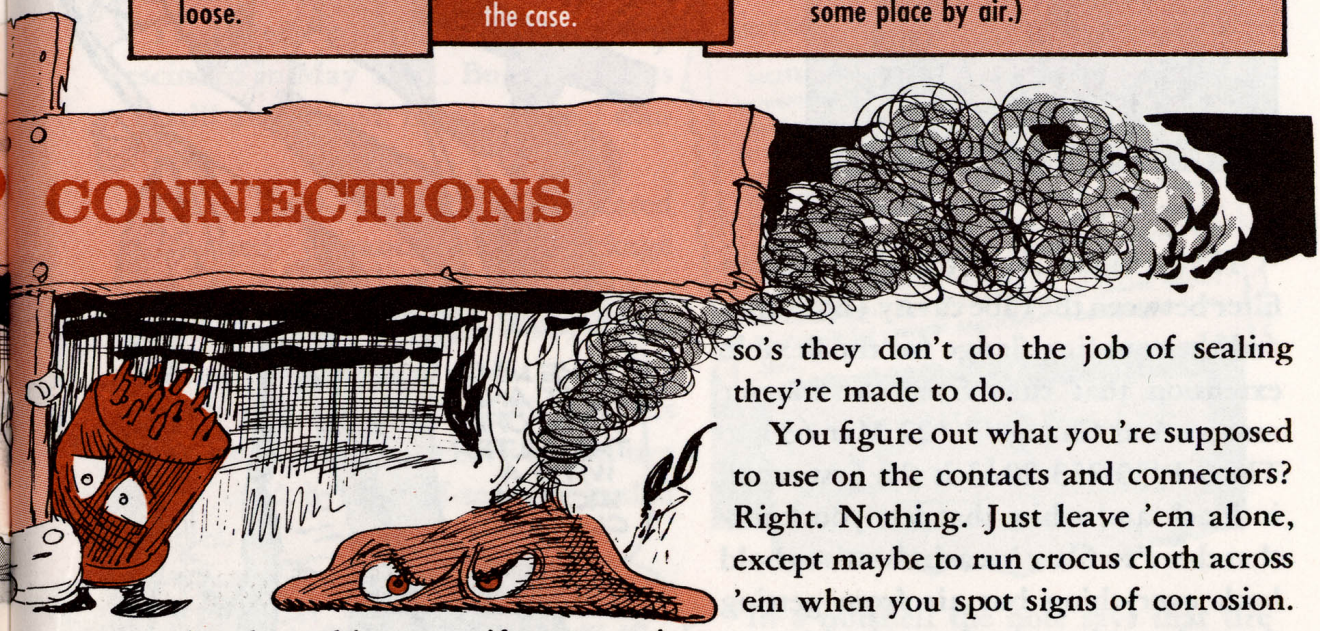


CONNECTIONS



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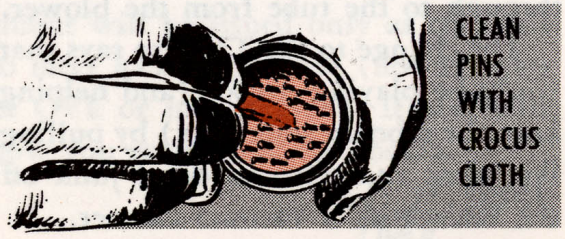
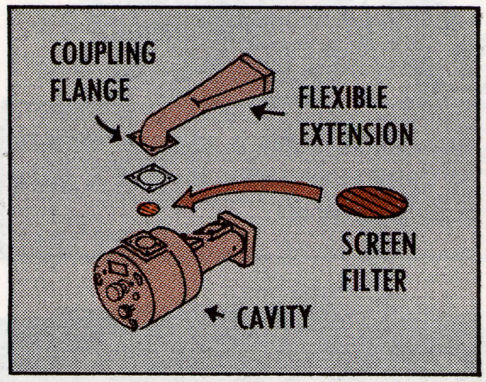


AN ILL WIND

Maybe you're doing the same thing as guys at some other Nike-Hercules HIPAR sites—almost making a career out of running back and forth between the supply shelf and the stalo cabinet in the HIPAR building.

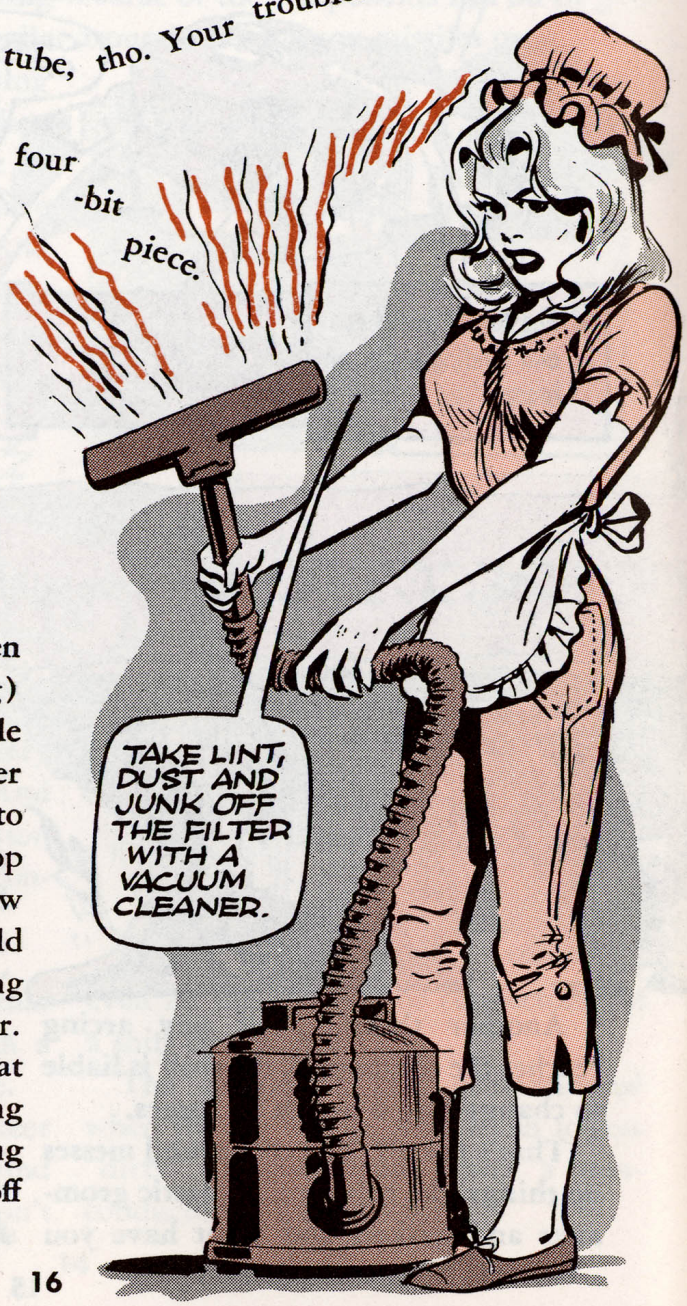
You make tracks walking up to the stalo cabinet and pulling out a bum type 3CX100A5 V5 electron tube from one or more of the five chassis in the cabinet. And you make more getting a new tube off the shelf and putting it in the equipment.

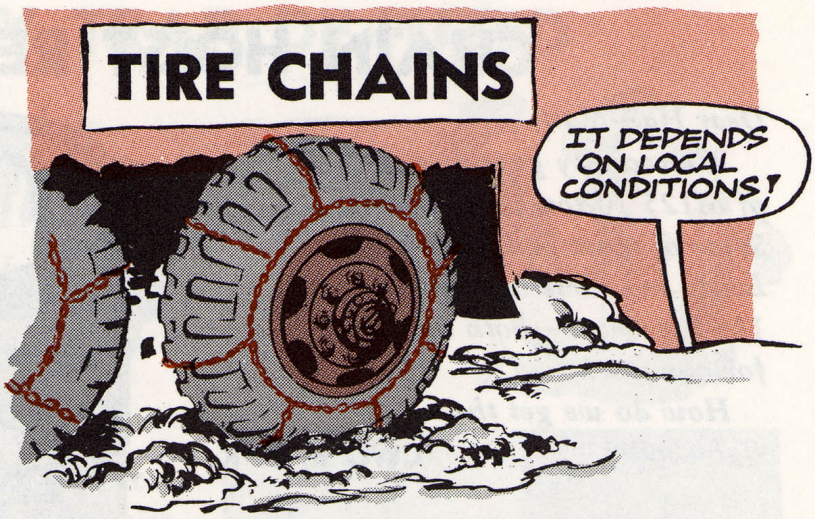
Don't be too quick to blame the tube, tho. Your troubles might be caused by a screen filter about the size of a four-bit piece.



That's right . . . there's a screen filter between the tube cavity (housing) and the coupling flange for the flexible extension that runs from the blower motor. And Change 2 (22 Mar 63) to TM 9-1430-253-20/3 is the first scoop in black and white that lets you know that there's a filter in each chassis to hold back everything but air from getting through to the tube from the blower.

The change to the TM also says that you'll be playing it cool (and helping keep the tube the same way) by pulling lint, dust and other assorted junk off the filter with a vacuum cleaner.





Dear Half-Mast,

Just about every Basic Issue Items List printed in our TM's tells us that the authorization for the tactical wheeled vehicle tire chains is SB 9-99 which says we can have the chains to meet local weather conditions.

Now SB 9-99 has been rescinded.

Our question is: Are we still authorized tire chains based on local weather conditions or are the chains now OEM (OVM) for every vehicle?

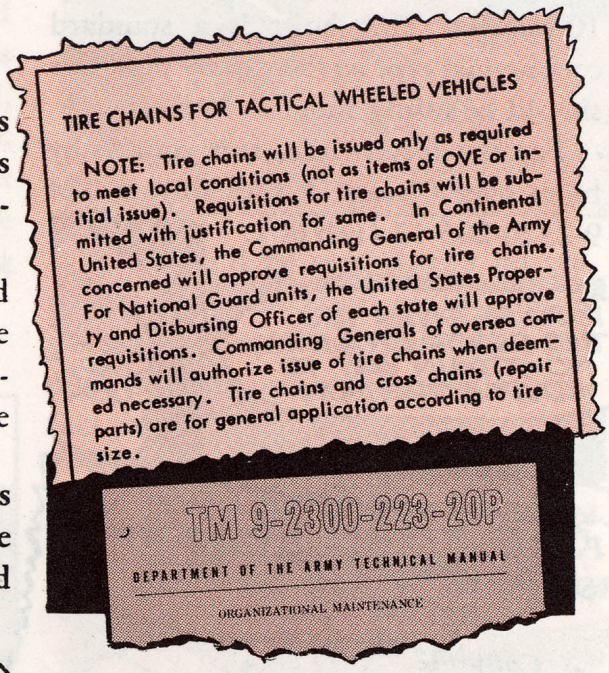
SFC H. W. T.

Dear Sergeant H. W. T.,

You're right about SB 9-99; it was rescinded in May 1961. But tire chains are still authorized, based on local conditions.

TM 9-2300-223-29P, Consolidated Authorized Organizational Stockage List of Repair Parts for Tank-Automotive Materiel (Nov 62) is the directive pub you now go by.

Beginning on page 222, this TM lists the nomenclature and FSN's for all tire chains used by the M-series wheeled vehicles.



In a nutshell the note says that tire chains will be issued only as required to meet local conditions (not as items of OVE or initial issue). It also tells how you requisition the chains.

Half-Mast

CHAIN HOIST READY

Dear Half-Mast,

We recently got a bunch of M125 10-ton cargo trucks. Some of them had 3-ton chain hoists and some of them had 1½-ton hoists—both too light for our work.

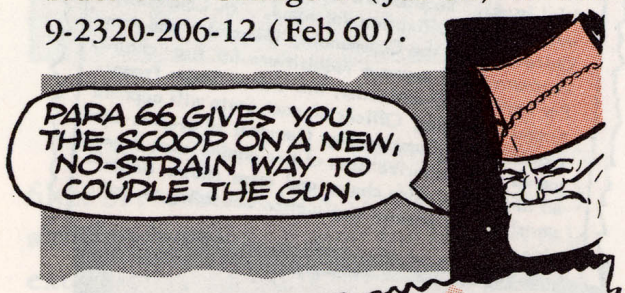
How do we get the right hoist? **CWO R. L. K.**

Dear Mister R. L. K.,

Hold the fort, podner, they're riding to the rescue. What we mean, a new five ton chain hoist is on the way to replace the hoists you've got.

It goes under FSN 3950-086-7196 and will be an OVE item on new M125 10-tonners. This hoist is a standard commercial type so the supply pipe-line should be filling soon.

For the meanwhile, run your baby blues over Change 1 (Jul 62) to TM 9-2320-206-12 (Feb 60).



Page 37

66. Drawbar and Trail Clamp Bracket (fig. 31)

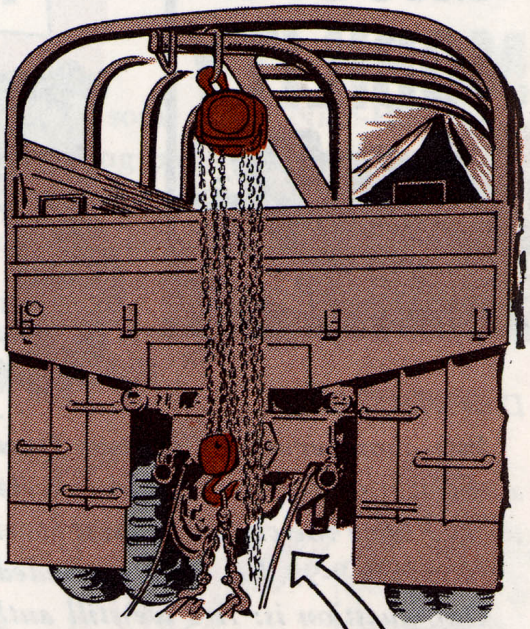
a. Coupling the Gun.

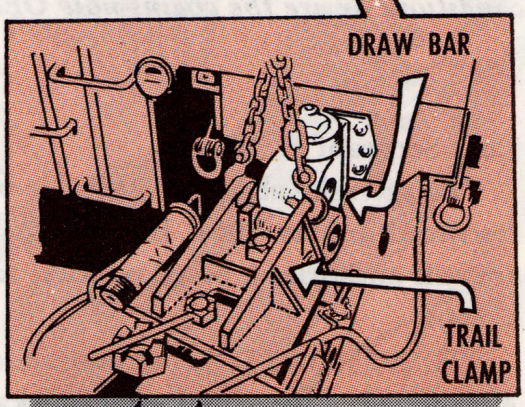
* * * *

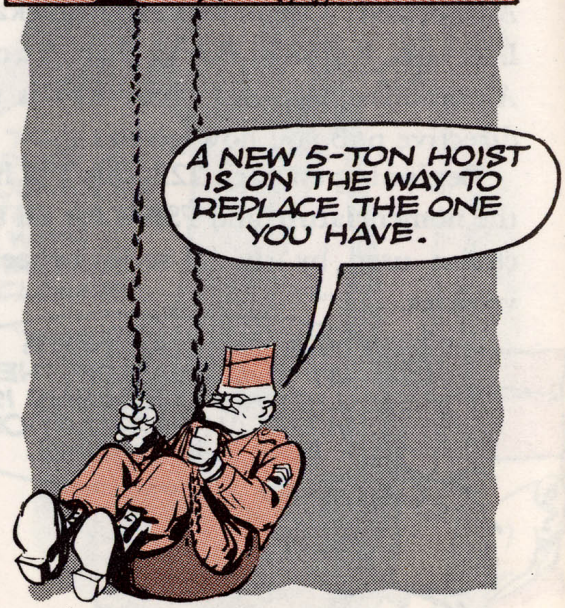
(6) (Superseded) Place chain hoist on

This'll make life easier for your hoists so they'll hold out 'till you can get the new ones.

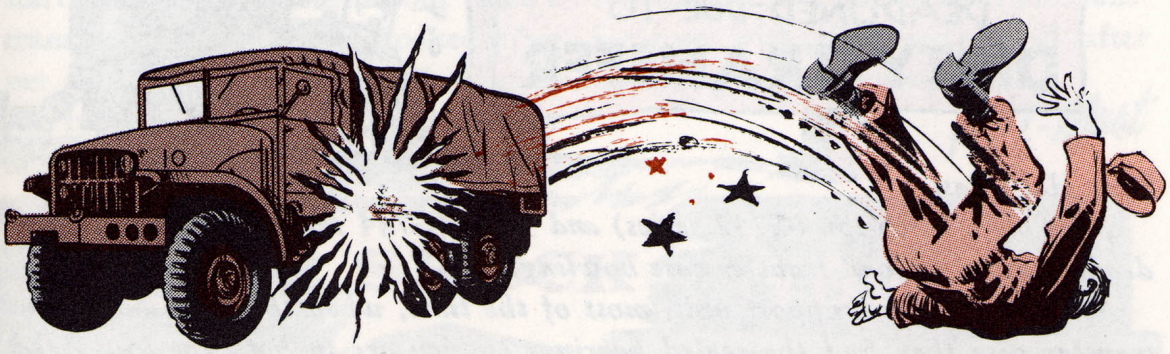
Half-Mast







BOOBY TRAP DE-FUZED

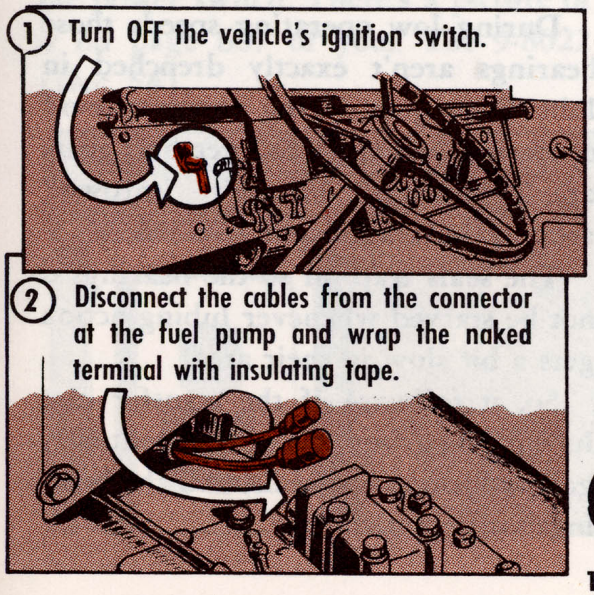


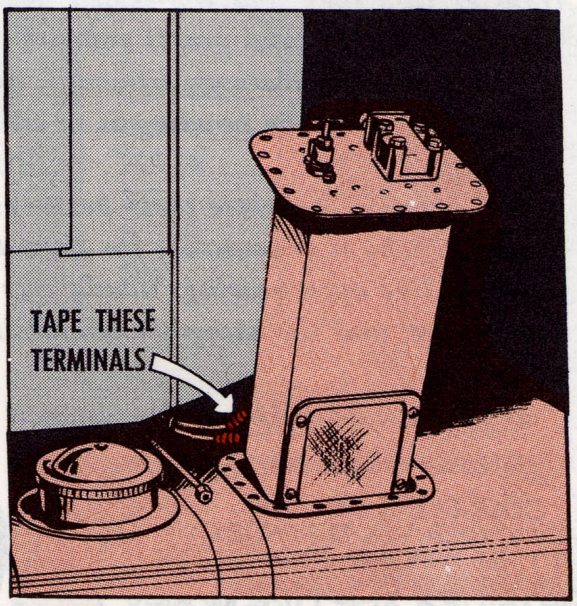
This is a known fact . . . the electrical fuel pump in your 2½-ton G749-series trucks must have its filter scrubbed clean at every semi-annual service. Another fact, but not too well known, is the possible booby trap that's present when doing this cleaning job.

The possible booby trap is the electrical connection on top of the fuel pump housing. If this electrical line is left hot and naked while disconnected, you could be in for a booming time.

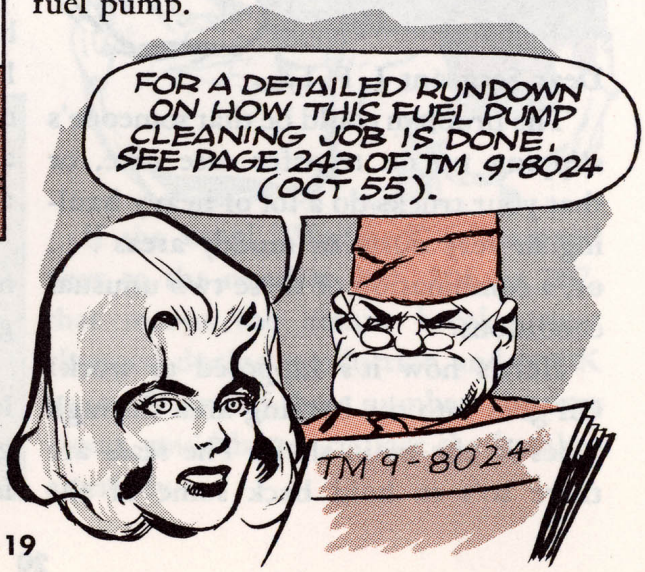
Accidents are usually made; they just don't happen. So, before you remove the fuel pump to do a filter cleaning job, de-fuze that booby trap.

Here's how you do it:





Now you'll be sure there's no possibility of an electrical spark igniting gasoline fumes in your fuel tank while removing, cleaning and installing the fuel pump.



Dear Half-Mast,

Some of our 2½-ton (G742 series) and 5-ton (G744 series) trucks often get deadlined due to loud transfer case howling.

According to our support unit, most of the time, when they tear down the transfer case they find the sealed bearings (which are in both the low-speed and in the high-speed gears) covered with sticky grime.

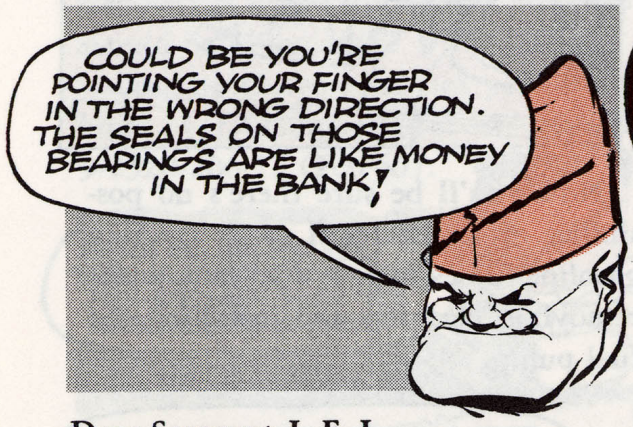
Sometimes the bearings are worn, and replacement's needed. Usually all it takes to clear up the howling is to clean out the trapped grit and re-lube the bearings.

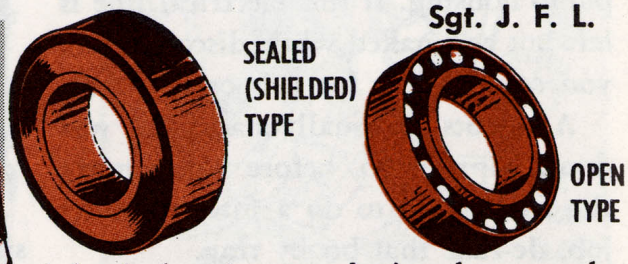
My question is—since these bearings are in the middle of the transfer case assembly why is it necessary for them to be sealed?

Seems like open bearings would stay washed out, wouldn't trap grime, they'd last longer, and the assembly wouldn't have to be torn down just to wash the bearings.

It sure would help our operation if we could lick this problem.

Sgt. J. F. L.





Dear Sergeant J. F. L.,

The problem could be that someone's slipping up on transfer case care, or that your trucks do a lot of heavy hauling in very dusty or muddy areas . . . or, a combination of these two unusual conditions.

Here's how it's supposed to work: Oil goes into the bearing area through holes in the main shaft. The seals are there so's to hold back some of the lube the bearings get during the normal lubing operation.

During low operating speeds those bearings aren't exactly drenched in lube. Same goes during power-take-off operation (when the countershaft gears aren't turning, oil isn't "thrown" around those bearings).

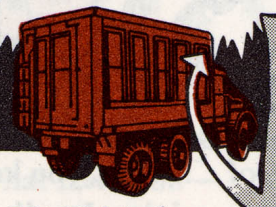
The seals trap oil so the bearings'll not be starved whenever lubing action gets a bit slow in their area.

So, it follows—if the transfer case lube is real grimy, the goo'll eventually get trapped by the seals, and the bearings will pay the price.

To lick your problem you might start out by finding out if your truck's transfer cases are getting looked after per the vehicle's LO and TM. Also, if you're regularly operating in very dusty or muddy areas, check your lubing SOP for gear cases. In some places, for example, it's SOP to flush the transfer case with light weight oil after operating in very grimy areas.

Half-Mast

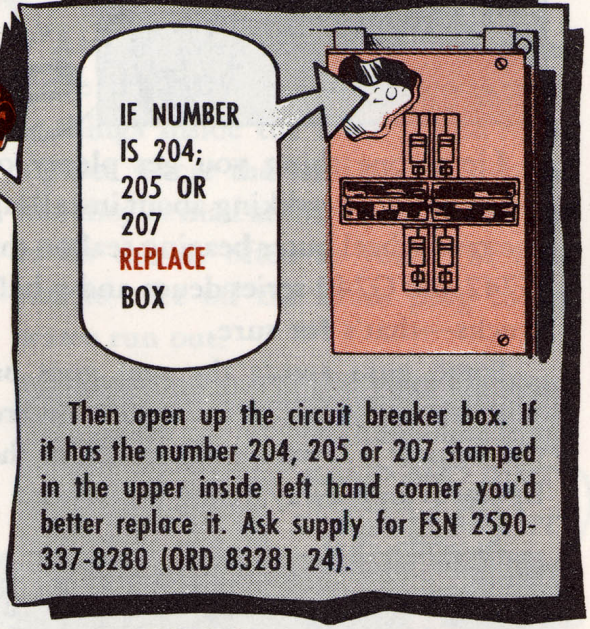
THIS'LL SHOCK YOU

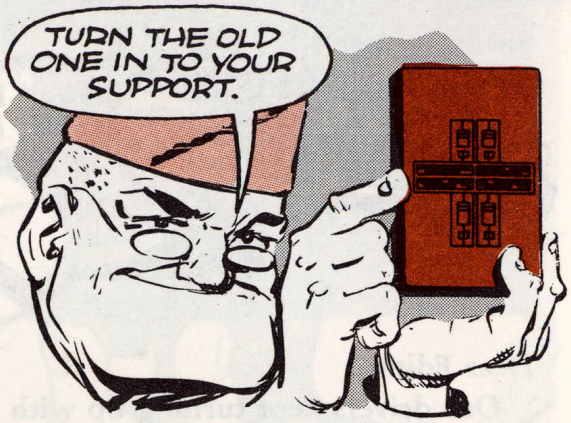


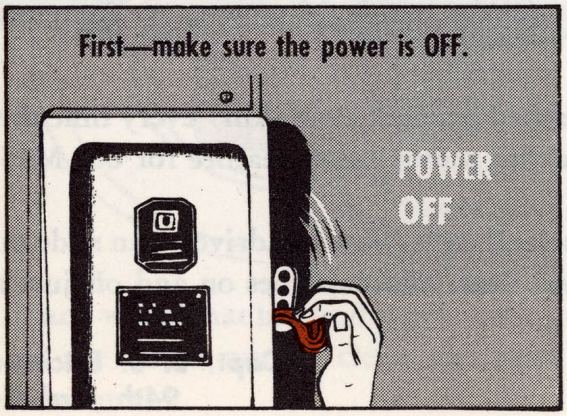
If you have a 2½-ton M109A1 shop van truck identified by contract number DA-10-018 ORD 23550 you might be in for a shocking experience one of these days.

It seems that on some of them the insulation inside the circuit breaker box has been breaking down. O'course when this happens the 115-volt current can make the whole cab body act like a "hot" electric wire.

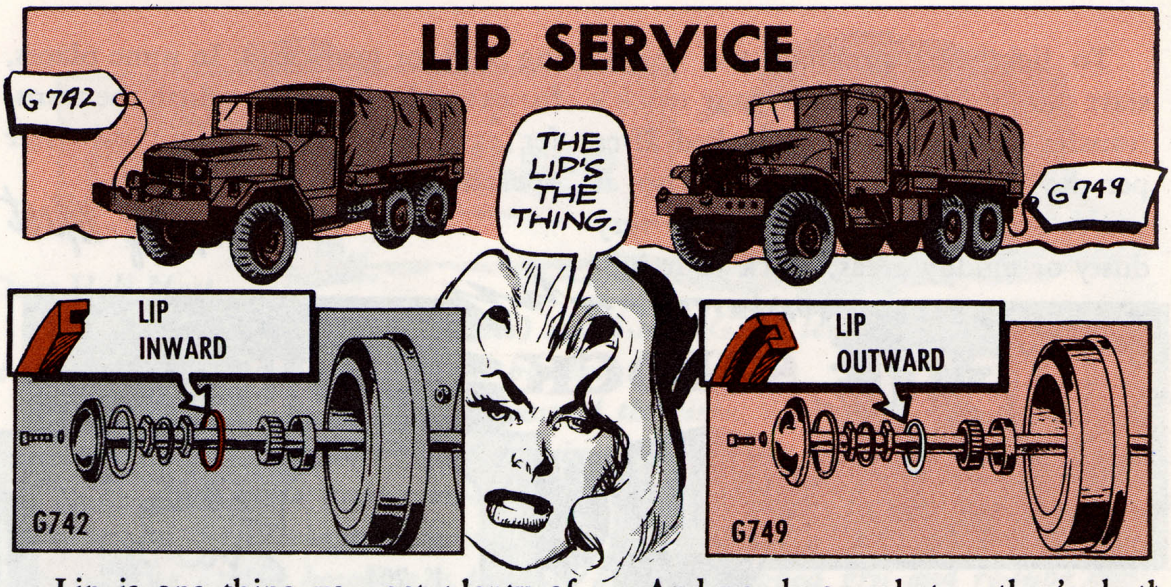
This can be kind of unpleasant . . . so better check out your circuit breaker now. It's on the front panel just above the power switch. There's a picture of it on page 607 of your TM 9-8022 (Dec 54).







If the word "Modified" is stamped next to the number 204, 205 or 207, that means the circuit breaker was changed during production and is OK to use. If any of these numbers appear alone, you'd better replace the breaker assembly.



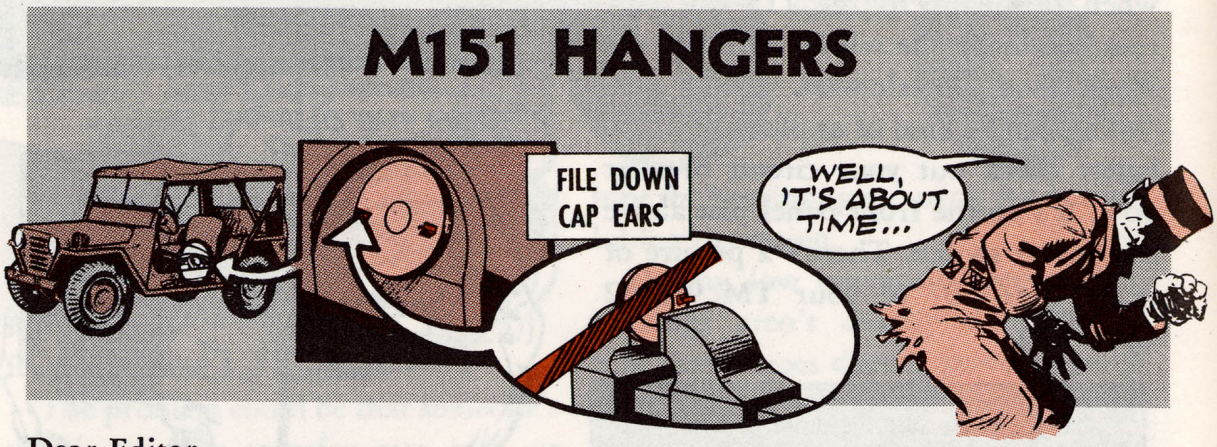
Lip is one thing you get plenty of when you start yakking about installing the rear wheel outer bearing seal on the G742 and G749-series deuce-and-a-half trucks—that's for sure.

Some guys swear the seal goes on with the rubber lip facing in toward the vehicle . . . while others claim the lip faces out away from the truck.

And, you know what . . . they're both right. It all depends on what truck series you're working on at the time.

On the G742-series, the seal is installed with the lip inward—so it rides on the race of the bearing cone.

However, on the G749-series it's mounted with the lip facing away from the cone.



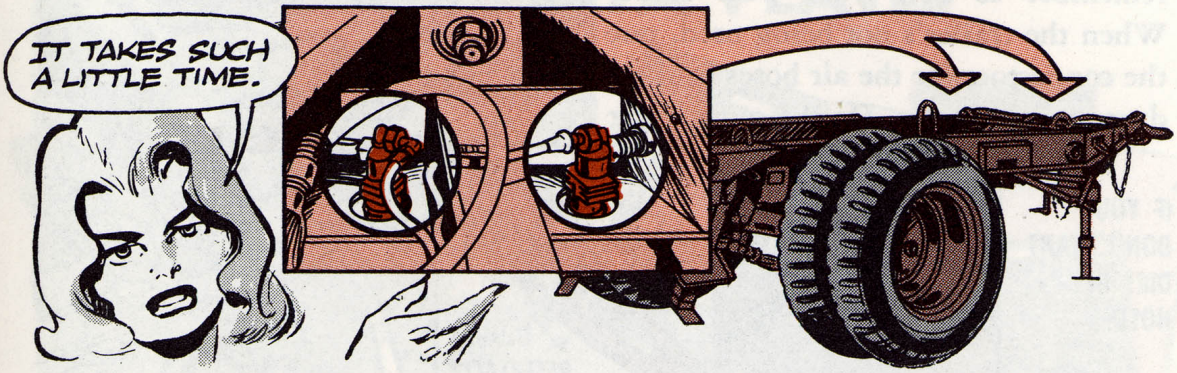
Dear Editor,

Our drivers kept turning up with gashed britches (and skin) every time they slid off the seat, so the safety officer OK'd this minor safety feature for our M151 ¼-ton trucks.

File down the sharp ears on the gas tank caps. Now the drivers can slide out comfortably, and without torn cloth and flesh. The cap goes on and off just as easy with short, stubby ears.

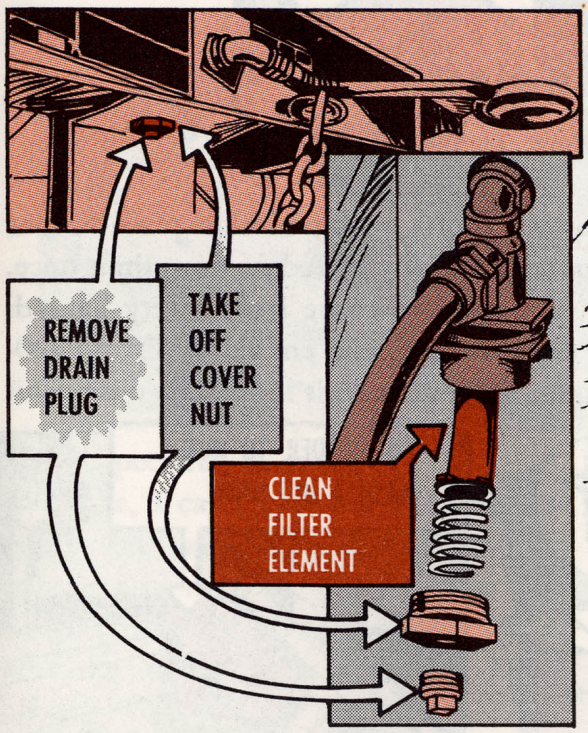
Capt. E. S. Erickson
94th Ord Co

KEEP THAT FILTER CLEAN

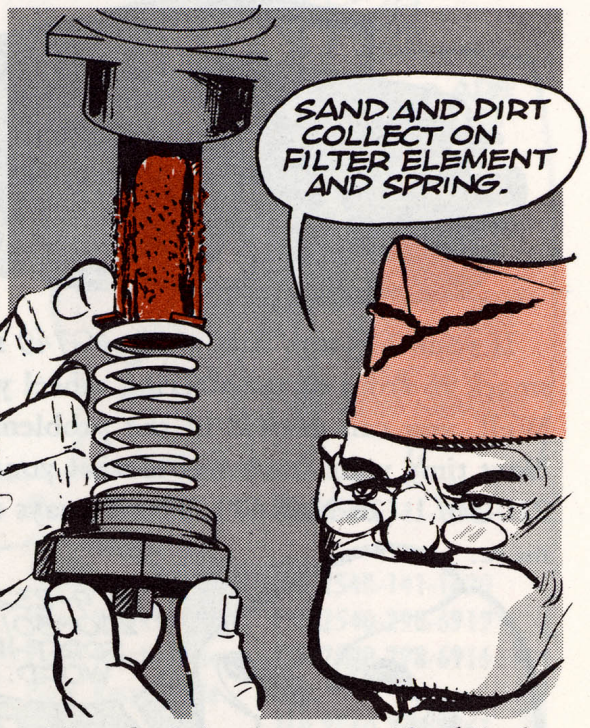


It takes a little of your time, but it's time well spent when you take care of the air filters on any trailer chassis—be it cargo, generator or what have you—that's equipped with air-over-hydraulic brakes.

The TM for your trailer chassis spells out the way you maintain the filter, or filters if yours happens to have two. Maintaining the filter is as simple as removing the drain plug to get rid of any water that has built up to taking off the cover nut to clean the filter element.



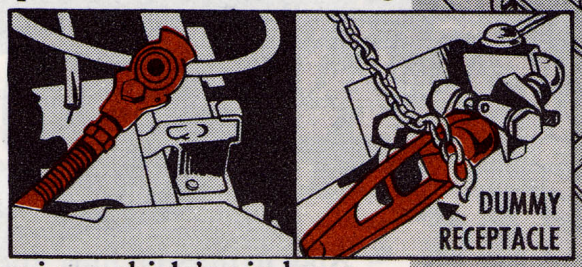
And it doesn't hurt for you to remove the cover nut for a good look at things inside the filter if you're in a place where the sand and dust blow like they're mad at the world. You want to do this as often as your TM tells you to take off the drain plug to let water run out.



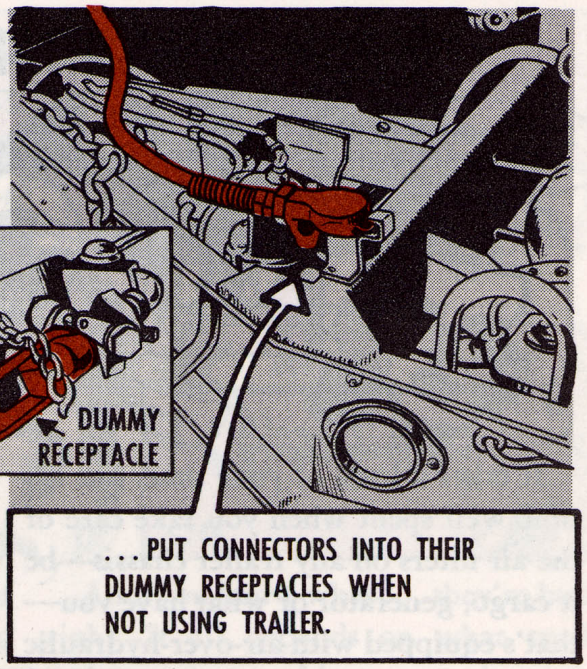
The deal is that any "junk" that collects in the air filter keeps it from doing its job. And that job is just what it says: To filter air. Dirty air that gets by the filter can damage the brake system—sure enough.

P.S. MORE

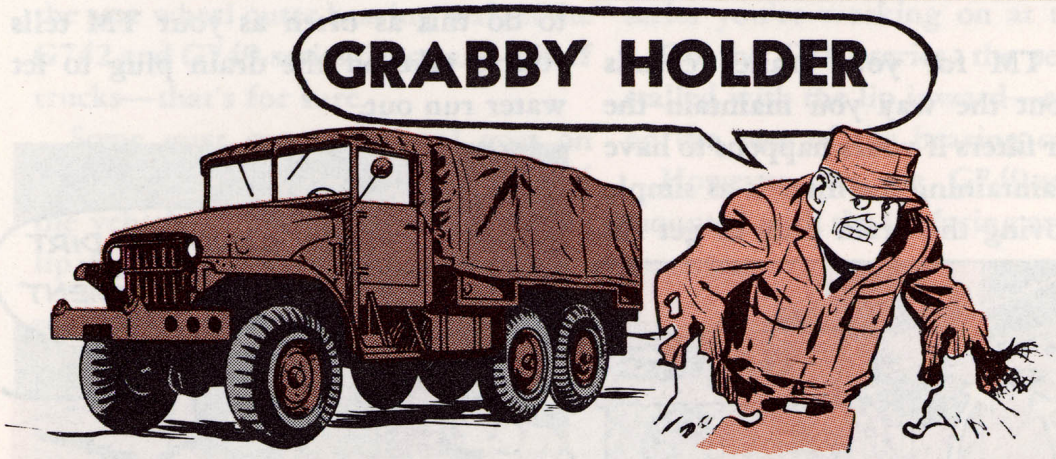
There's something else you want to remember to help your own cause. When the trailer's not being used, put the connectors for the air hoses in their dummy receptacles. Do the same thing with the towing vehicle's air hoses.



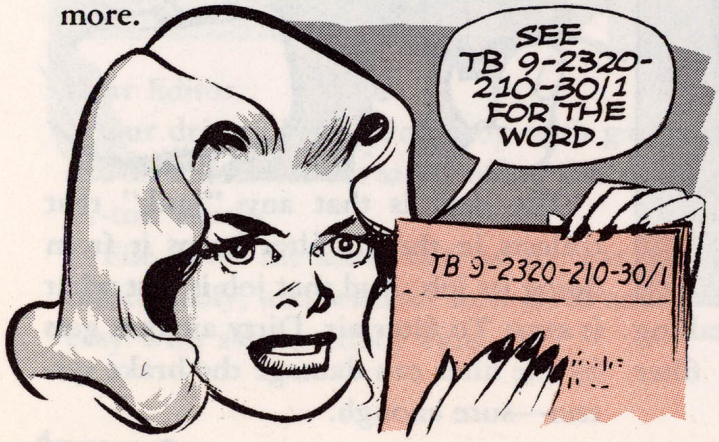
Not having the connectors in the dummy receptacles means all sorts of stuff can wind up in the hoses.

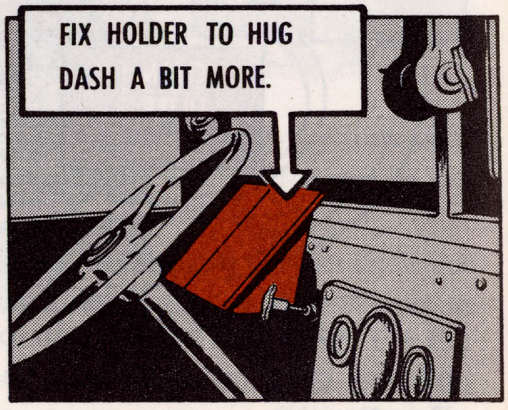


GRABBY HOLDER

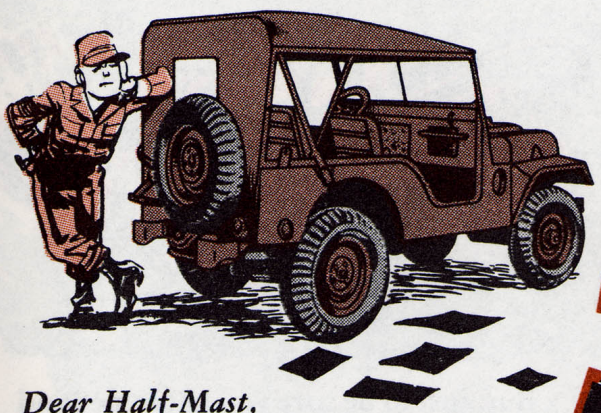


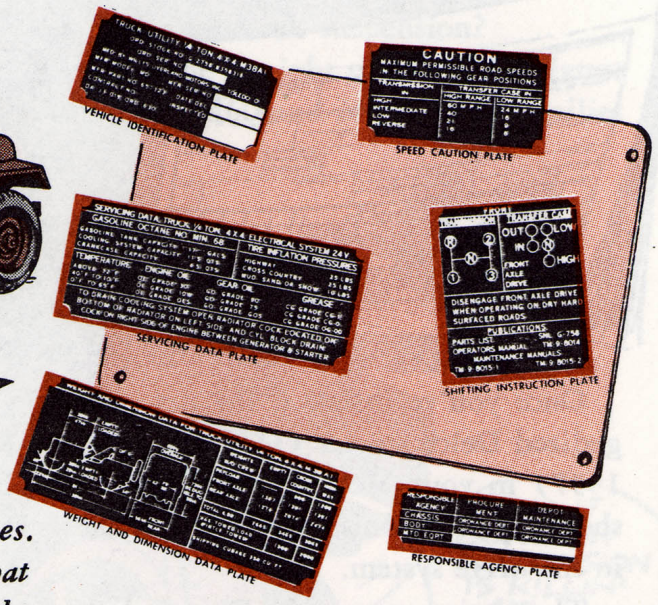
If your 2½-ton, 6x6, truck (G749 series) sports an instruction plate holder smack in front of the steering wheel you've probably cuffed it more than once. Well, you can get rid of the problem easy enough, cause it's a safety hazard. Next time your truck has to visit your support shop ask 'em about TB 9-2320-210-30/1 (28 Nov 62). The TB says to fix the holder so it'll hug the dash a bit more.





M38A1 DATA PLATES



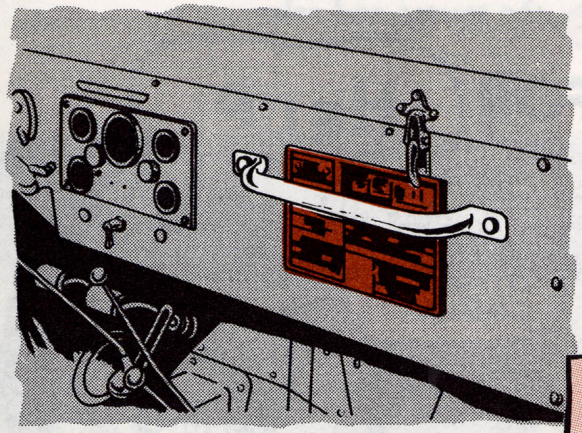


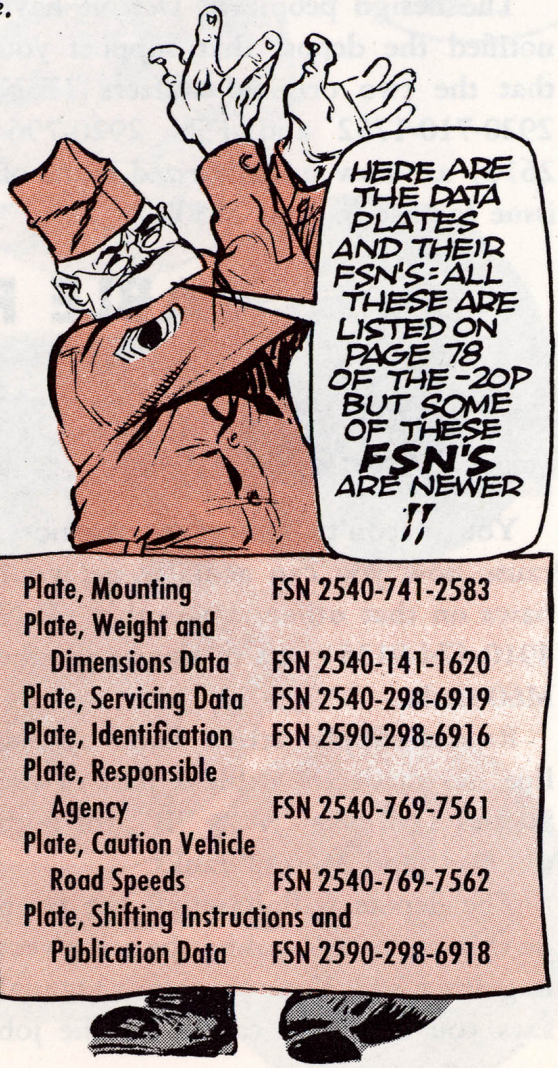
Dear Half-Mast,

TM 9-2320-208-20P (Feb 59) page 78 gives FSN 2590-693-4231 for Plate: mounting, w/related Plates. From experience we've found out that these plates are for the M170 ambulance.

We need the similar item for the M38A1; can you give us the Federal Stock Number for it?

Sp-4 B. J. G.





Plate, Mounting	FSN 2540-741-2583
Plate, Weight and Dimensions Data	FSN 2540-141-1620
Plate, Servicing Data	FSN 2540-298-6919
Plate, Identification	FSN 2590-298-6916
Plate, Responsible Agency	FSN 2540-769-7561
Plate, Caution Vehicle Road Speeds	FSN 2540-769-7562
Plate, Shifting Instructions and Publication Data	FSN 2590-298-6918

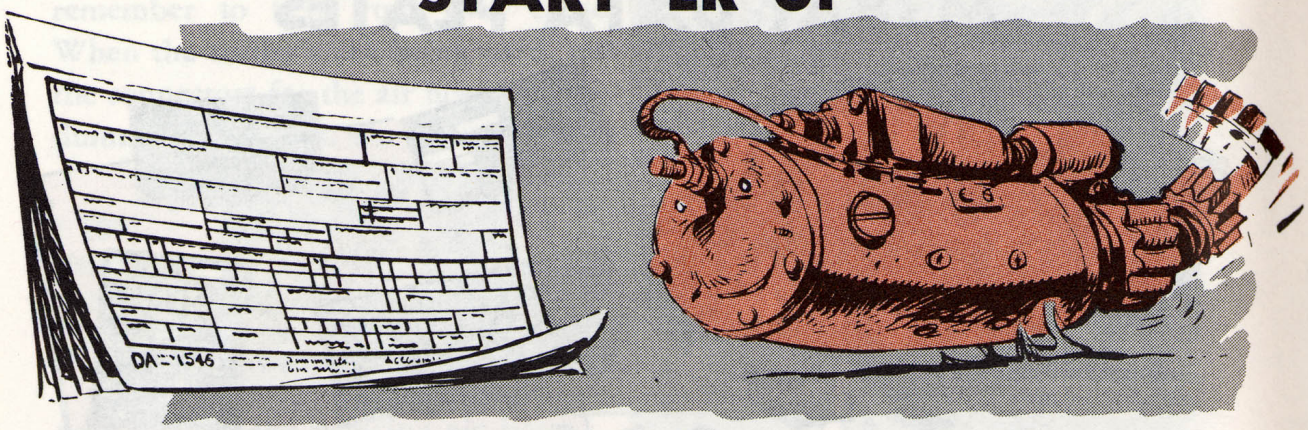
Dear Specialist B. J. G.,

Nope, I can't give the FSN because there isn't any. As you have already found out, the FSN listed in the -20P is for the M170 only. An equal assembly for the M38A1 ¼-ton Utility Truck is not available.

In place of the complete assembly you'll have to requisition the individual plates needed for the M38A1.

Half-Mast

START 'ER UP



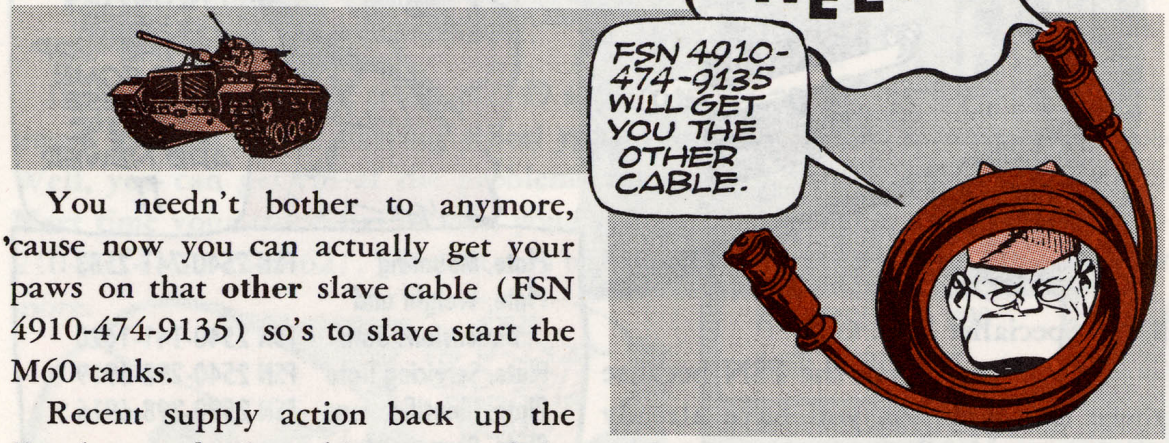
Once you've installed the new ruggedized Delco starter (FSN 2920-973-1557) in your M60 medium tanks, it should spell the finish to mucho troubles in the drive system.

The design people in Detroit have notified the depots that support you that the two original starters (FSN 2920-710-1752 and FSN 2920-796-2616) are now unauthorized items of issue for use in your M60's.

But, just to be sure you get some kind of a starter back after it's been ordered, play it a bit cool and show all three FSN's on your DA Form 1546, but indicate that FSN 2920-973-1557 is preferred.

Another reminder: Before you can use the new starter you've gotta have MWO 9-2350-215-20/9 (16 Apr 62) applied so's to have compatibility 'twixt the starter and relay.

CABLE FOR HELP



You needn't bother to anymore, 'cause now you can actually get your paws on that **other** slave cable (FSN 4910-474-9135) so's to slave start the M60 tanks.

Recent supply action back up the line has made the cable a part of the Special Tool Sets "A" & "B", for both the M60 and M60A1 tanks.

The depots will have all the poop on this, so there shouldn't be any sweat in getting 'em. Your operator's manual says you need two cables for the job and this action enables you to get 'em.

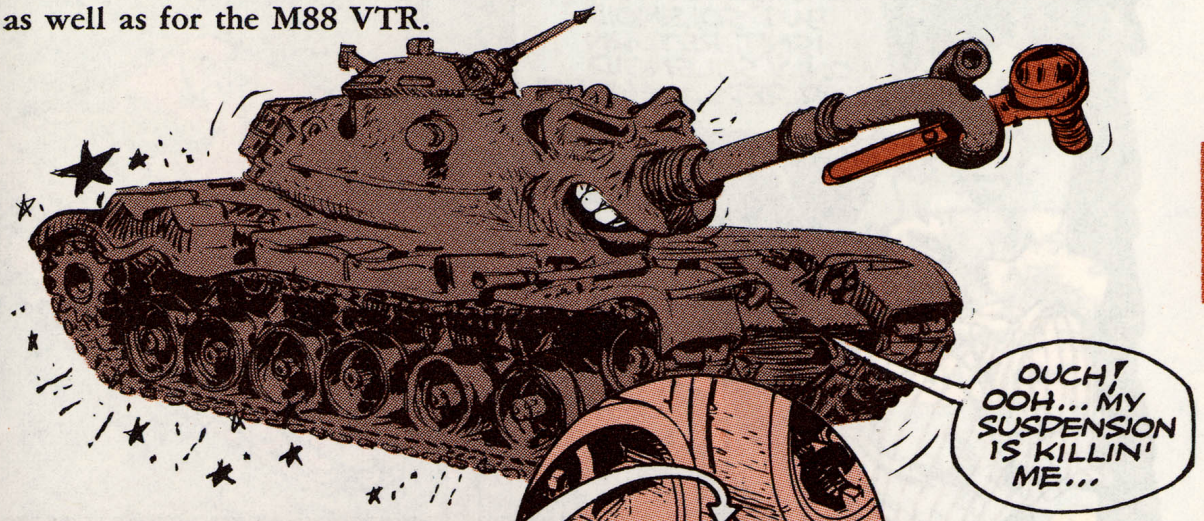
You've already got one cable in your No. 2 Common Tool Kit. Pair 'em up and you're in business.

They're used in pairs when slave starting so the jolt won't melt the soldering points in the terminals.

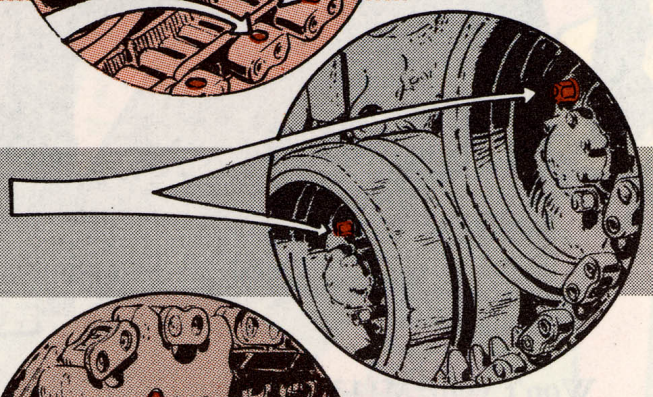
TANK TORQUE TALK

Having troubles with the torque values on your tank suspension?

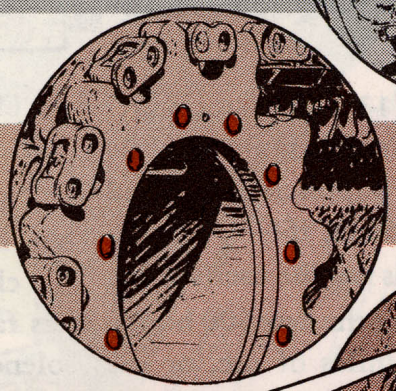
This-here-now handy little guide gives you the straight poop and the latest word on suspension torque values for the M48, M60 and M103 tank families as well as for the M88 VTR.



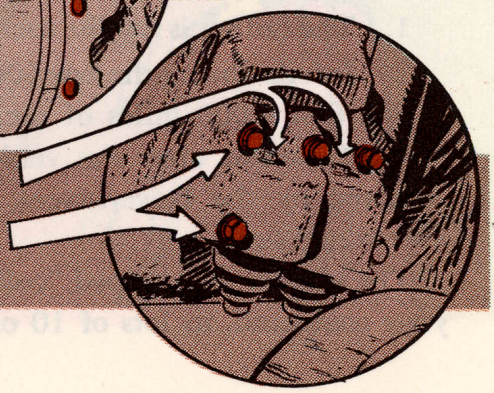
TRACK GUIDE NUTS—300-320 ft-lb.
END CONNECTOR WEDGE BOLTS—140-160 ft-lb.



ROAD WHEEL AND COMPENSATING IDLER WHEEL STUD NUTS—380-420 ft-lb (except for the M88 which gets 350-400 ft-lb).

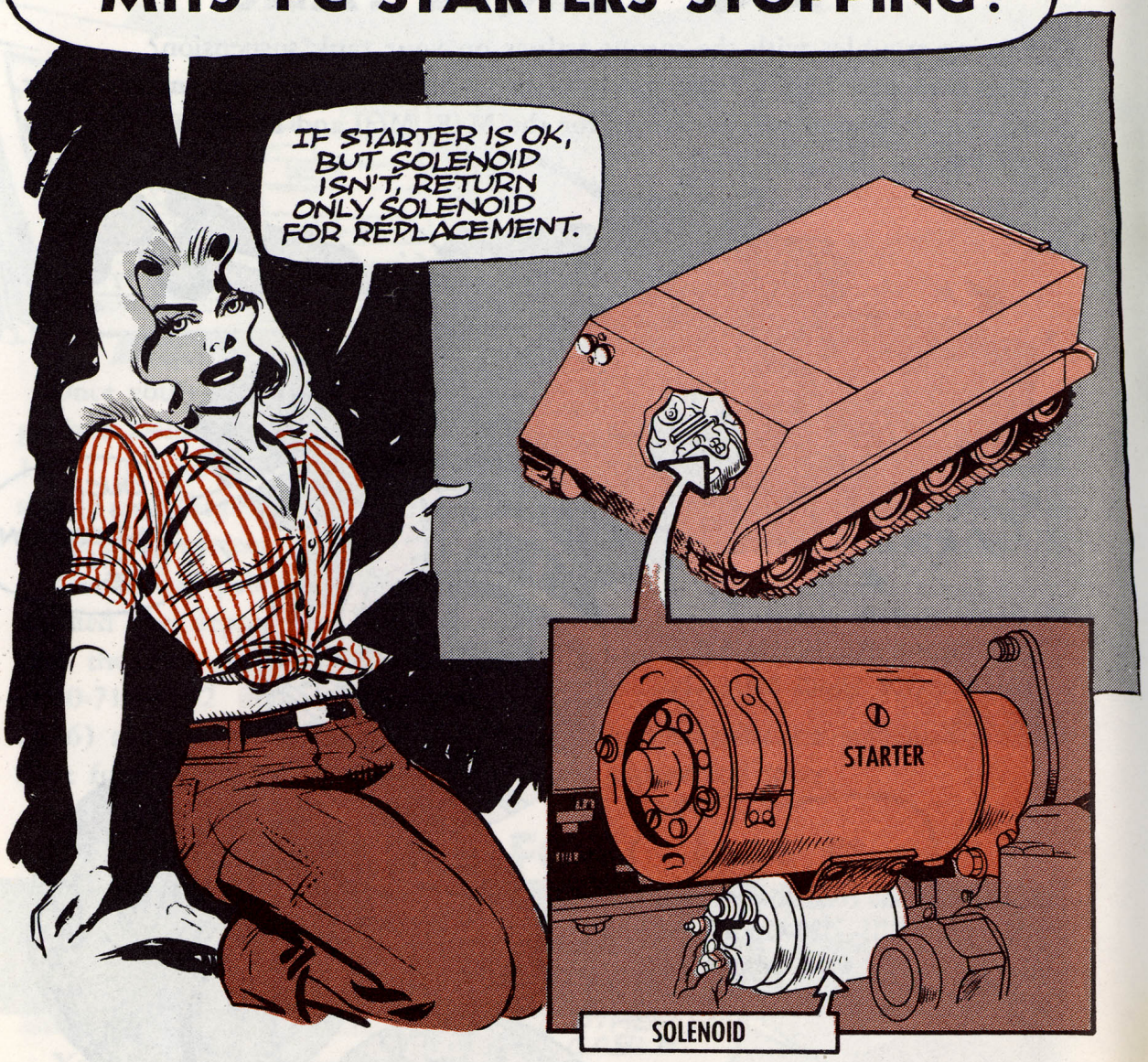


SPROCKET STUD NUTS—160-180 ft-lb (except for the M88 which takes 150-170 ft-lb).



BUMPER SPRING BOLTS—150-170 ft-lb. (M88 only.)
BUMPER SPRING ASSEMBLY BOLTS—350-400 ft-lb. (M88 only.)

M113 PC STARTERS STOPPING?



Won't your M113 PC starter start?

Some baddie starters slipped by the inspectors, but the supplier has agreed to make good on them, if—

1. The failure is not the user's fault.

2. It fails during the first 500 hours, or the first 4,000 miles of use, or the first 12 months after the vehicle was accepted by the Government, whichever comes first.

The starters get shipped "collect" by your command, in lots of 10 or more, to: Electric Autolite Company, Attention: R. E. Wittman, Bay City, Mich.

The entire starter motor (Part Number 10875363) should be returned if the clutch or any portion of the motor has failed. If the starter is OK but the solenoid won't work, return only the solenoid for replacement.

The company will ship out replacement parts on an FOB Bay City basis.

So-o-o-o, if your starter won't start, get started replacing it.

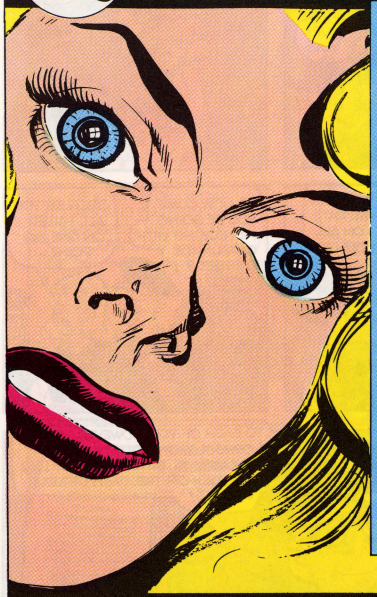
JOE'S DOPE
THE ANSWER
WHAT'S IT TAKE TO BE A GOOD DRIVER?? AND WIN A PICNIC DATE WITH YOU.
WELL, BOYS, THERE ARE ABOUT 20 BASIC ANSWERS TO THAT ONE.
IDEAL DRIVER

FIRST AND FOREMOST... A GOOD DRIVER DOES NOT HAVE ACCIDENTS!
OUTTA MY WAY.
...HE'S PROUD OF HIS VEHICLE... CHECKS IT BEFORE STARTING... AND WARMS UP THE ENGINE BEFORE MOVING OUT... NATURALLY, HE'LL HAVE MAPS, TRIP TICKET, FORMS, SPARE TIRE AND TOOLS ABOARD!
HMM... I'D BETTER CHECK.
HE CHECKS OIL, WATER TIRES AND BATTERY DAILY... AND KEEPS HIS VEHICLE CLEAN AND LUBED!
INCLUDES CLEAN WINDSHIELD AND MIRROR, I SUPPOSE.
HE KEEPS BOLTS TIGHTENED AND PERFORMS 1ST ECHELON CHECKS AT HALTS!
NATURALLY, HE REPORTS TROUBLES PROMPTLY!

HE OBEYS TRAFFIC SIGNS, AND RULES OF THE ROAD. IS COURTEOUS AND HELPFUL TO OTHERS... IS PROPERLY DRESSED.
YUP, YUP.
DOESN'T SPEED AND MAINTAINS A PROPER DISTANCE FROM THE VEHICLE AHEAD...
WE'RE IN!
HE SUPERVISES AND CHECKS HIS LOAD.
THAT'S US WE RATE ON ALL COUNTS.
SO HOW COME YOU'RE GOING PICNICKING WITH CARBUNKLE O'TWEED?
BECAUSE YOU ALL FAILED ON ONE BIG POINT...
YOU FAILED TO SERVICE YOUR VEHICLE YOU PUT IT AWAY.
TO EACH OF YOU, HOWEVER, HERE'S A CONSOLATION PRIZE, A COPY OF DA LABEL 76, DATED 1 AUGUST 1962 TO STICK ON THE DASH OF YOUR VEHICLE!
A GOOD DRIVER
1. DOES NOT HAVE ACCIDENTS
2. Is proud of his record and his vehicle.
3. Check his vehicle before starting.
4. Checks oil, water, tires, battery daily.
5. Warms up engine before moving out.
6. Has road map, trip ticket, forms, spare tire, tools.
7. Keeps vehicle clean and lubricated.
8. Keeps windshield clean.
9. Keeps bolts tightened.
10. Performs 1st echelon checks at halts.
11. Reports troubles promptly.
12. Obeys traffic signs.
13. Does not speed.
14. Maintains proper distance from vehicle ahead.
15. Obeys the rules of the road.
16. Smokes at halts only.
17. Is properly dressed.
18. Supervises and checks his load.
19. Is courteous and helpful to others.
20. SERVICES HIS VEHICLE BEFORE IT IS PUT AWAY.
DA LABEL 76
1 AUG. 62

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULL

JOE'S Dope Sheet



IS THIS DASHBOARD LABEL TALKING ABOUT YOU?

IF IT IS... THEN YOU'RE ON THE BALL!!

A GOOD DRIVER

1. DOES NOT HAVE ACCIDENTS
2. Is proud of his record and his vehicle.
3. Check his vehicle before starting.
4. Checks oil, water, tires, battery daily.
5. Warms up engine before moving out.
6. Has road map, trip ticket, forms, spare tire, tools.
7. Keeps vehicle clean and lubricated.
8. Keeps windshield clean.
9. Keeps bolts tightened.
10. Performs 1st echelon checks at halts.
11. Reports troubles promptly.
12. Obeys traffic signs.
13. Does not speed.
14. Maintains proper distance from vehicle ahead.
15. Obeys the rules of the road.
16. Smokes at halts only.
17. Is properly dressed.
18. Supervises and checks his load.
19. Is courteous and helpful to others.
20. SERVICES HIS VEHICLE BEFORE IT IS PUT AWAY.

DA LABEL 76
1 AUG. 62

WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

A GOOD DRIVER

1. DOES NOT HAVE ACCIDENTS
2. Is proud of his record and his vehicle.
3. Check his vehicle before starting.
4. Checks oil, water, tires, battery daily.
5. Warms up engine before moving out.
6. Has road map, trip ticket, forms, spare tire, tools.
7. Keeps vehicle clean and lubricated.
8. Keeps windshield clean.
9. Keeps bolts tightened.
10. Performs 1st echelon checks at halts.
11. Reports troubles promptly.
12. Obeys traffic signs.
13. Does not speed.
14. Maintains proper distance from vehicle ahead.
15. Obeys the rules of the road.
16. Smokes at halts only.
17. Is properly dressed.
18. Supervises and checks his load.
19. Is courteous and helpful to others.
20. SERVICES HIS VEHICLE BEFORE IT IS PUT AWAY.

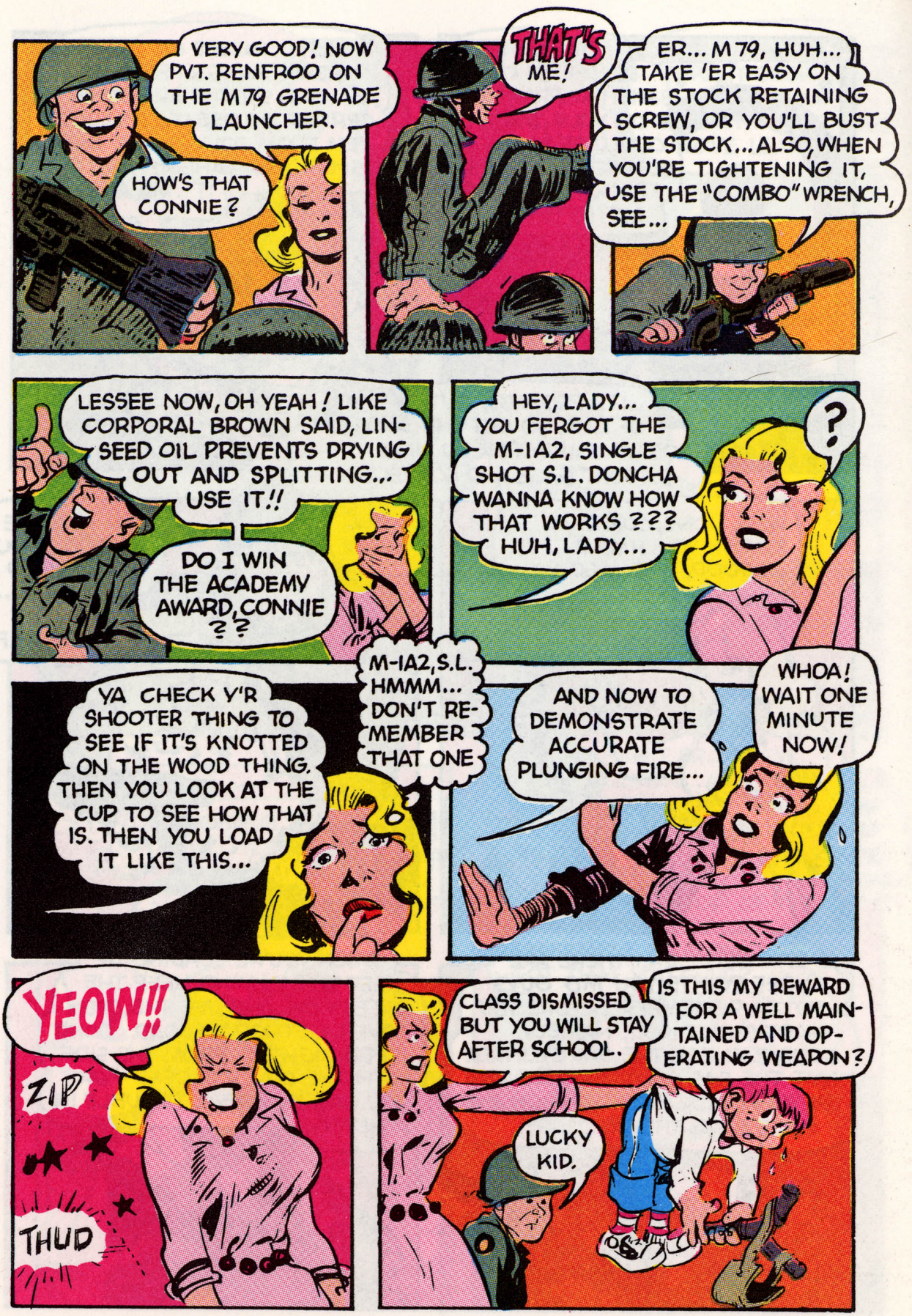
DA LABEL 76
1 AUG. 62

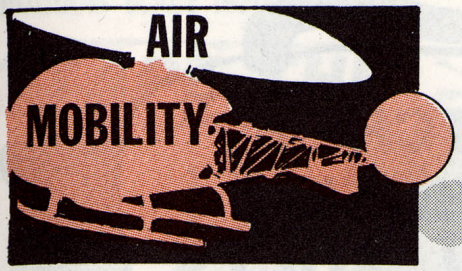
UIPMENT ... *Take care of it*

LETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

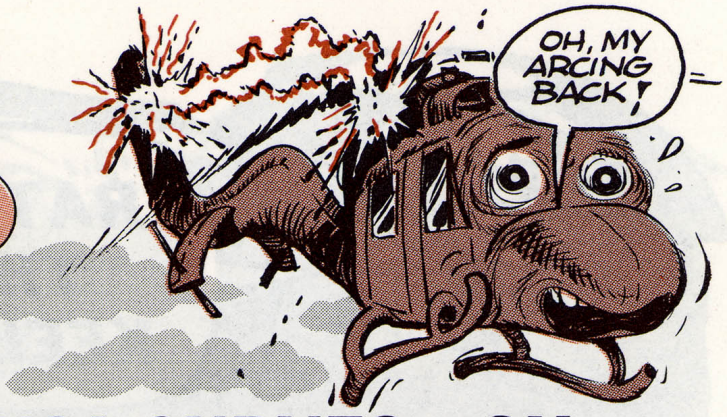
JOE'S DOPE
SMALL ARMS ASSEMBLY
...NOW THAT I'VE GONE THRU IT ONCE... I WILL SELECT SOME OF YOU TO DEMONSTRATE WHAT WE'VE LEARNED!
CONN
CLAS
ON
SMA
ARM
CORPORAL, BROWN! WILL YOU START, PLEASE. USE THE M14 RIFLE.
YES, MA'AM!
ALRIGHT, ER... AHEM... GENTLEMEN... AHEM... IN ORDER TO PROPERLY INSTALL THE PISTON IN THE GAS CYLINDER, YOU MUST LINE UP THE "D" SLOTS. ALSO, YOU MUST SEE THE PISTON STICKING OUT OF THE BOTTOM OF THE CYLINDER BEFORE YOU REASSEMBLE YOUR PIECE. GOT THAT, YOU GUYS?

NOW! IF YOU DEAD-EYES COME UP WITH A SPRAY PATTERN ON YOUR TARGETS IT COULD BE YOUR FLASH SUPPRESSOR THAT'S DOIN' IT... NOT YOUR BEADY LITTLE EYEBALLS!
LAST! LINSEED OIL IS NOT "GREASY KID STUFF" AS FAR AS YOUR STOCKS ARE CONCERNED. SO USE IT... IT'LL KEEP 'EM FROM DRYING OUT AND SPLITTING. =AHEM= THAT'S IT... MA'AM...
...IT'S PROBABLY OUT OF LINE, SO GET THE COMPANY ARMORER TO HAVE SUPPORT GAGE AND CORRECT IT.
WELL DONE, CORPORAL! THANK YOU. HMMM... PVT. OSGOOD! THE M60 MG PLEASE.
NOW, AHEM.
P-R-I-V-A-T-E OSGOOD... YOU WON'T NEED ME FOR THIS... HOLD IT YOURSELF!
ER... WELL... ER... THERE ARE THREE POINTS YOU MG GUYS GOTTA REMEMBER BEFORE YOU START SHOOTING... NAMELY, DOUBLE CHECK THE GAS CYLINDER NUT, THE GAS CYLINDER PLUG AND THE GAS CYLINDER EXTENSION AND MAKE SURE THEY'RE TIGHT.
WHEN YOU'RE LOADING UP, KEEP THIS IN MIND, KEEP THE SAFETY ON, AND USE THE OPEN COVER METHOD TO LOAD... DON'T FEED RIGHT IN FROM THE SIDE WITH THE COVER CLOSED—OR YOU CAN BUY REAL TROUBLE IN A HURRY.


VERY GOOD! NOW PVT. RENFROO ON THE M79 GRENADE LAUNCHER.
HOW'S THAT CONNIE?
THAT'S ME!
ER... M79, HUH... TAKE 'ER EASY ON THE STOCK RETAINING SCREW, OR YOU'LL BUST THE STOCK... ALSO, WHEN YOU'RE TIGHTENING IT, USE THE "COMBO" WRENCH, SEE...
LESSEE NOW, OH YEAH! LIKE CORPORAL BROWN SAID, LINSEED OIL PREVENTS DRYING OUT AND SPLITTING... USE IT!!
DO I WIN THE ACADEMY AWARD, CONNIE??
HEY, LADY... YOU FERGOT THE M-1A2, SINGLE SHOT S.L. DONCHA WANNA KNOW HOW THAT WORKS??? HUH, LADY...
?
YA CHECK Y'R SHOOTER THING TO SEE IF IT'S KNOTTED ON THE WOOD THING. THEN YOU LOOK AT THE CUP TO SEE HOW THAT IS. THEN YOU LOAD IT LIKE THIS...
M-1A2, S.L. HMMM... DON'T REMEMBER THAT ONE
AND NOW TO DEMONSTRATE ACCURATE PLUNGING FIRE...
WHOA! WAIT ONE MINUTE NOW!
YEOW!!
ZIP
THUD
CLASS DISMISSED BUT YOU WILL STAY AFTER SCHOOL.
IS THIS MY REWARD FOR A WELL MAINTAINED AND OPERATING WEAPON?
LUCKY KID.



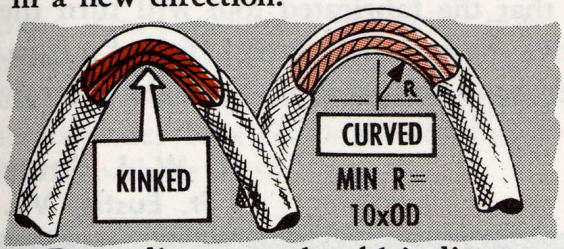
ELECTRICAL CABLE CLUE...



KINKS – NO! CURVES – SI!

Any time you come up against a short in your electrical harnesses it might pay to trace back over the wiring for a kinked lead.

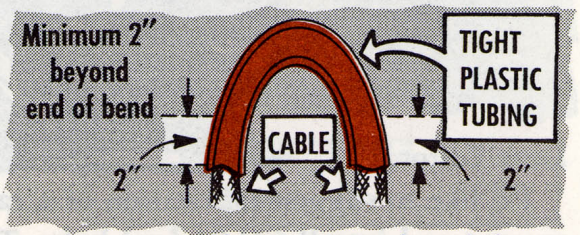
Forcing a cable into a tight bend pinches the metallic braid cover against the wiring insulation inside. The right installation is to keep a smooth, round bend each time you route that cable in a new direction.



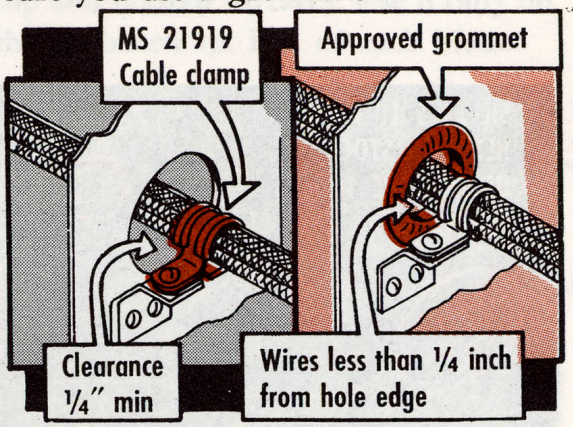
Depending on each cable's diameter, the minimum radius should be **10 times** the braid's outside diameter.

If you're backed against the wall, **coaxial cable** can be brought in as tight as **6 times** the OD, if really necessary. And **non-coaxial cable** may be bent to an extreme minimum of **3 times** the OD **where no other choice is possible.**

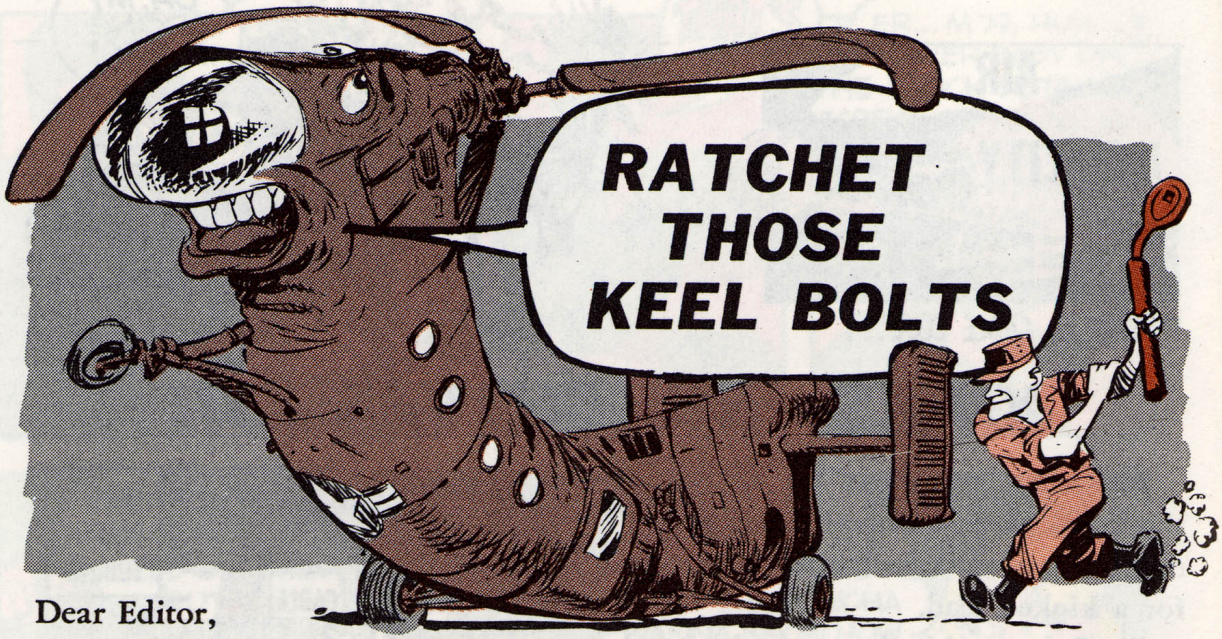
At terminal strips it's OK to bend non-coaxial cable as tight as **3 times** OD and, where necessary, single cable can be bent beyond the minimum radius if you wrap it in tight plastic tubing for a length of at least two inches past the bend on both sides.



Also try to keep a 0.25-in minimum clearance between harness branches and all nearby fixed components, especially those with sharp edges or other wires routed alongside 'em. And if a cable has to be routed closer than 0.25 inch from the edge of a bulkhead hole, be sure you use a grommet.



Following these rules should lengthen cable life by preventing excessive bend stresses and chafing. That's why they were included in Section XI of TM 11-530 (Dec 59), which is the Army's guide on "Installation Practices for Aircraft Electric and Electronic Wiring." See if you can pick up a copy.

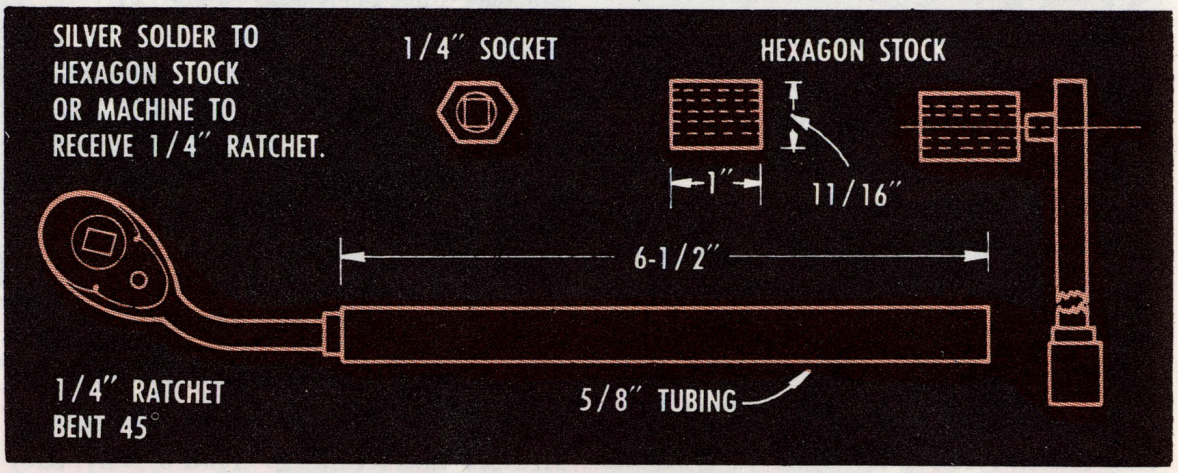


Dear Editor,

I'd like to suggest fabrication of a ratchet wrench that will make it easier to remove and install CH-21 keel bolts. This item can be made for the cost of the ¼-in drive ratchet—the other materials being scrap.

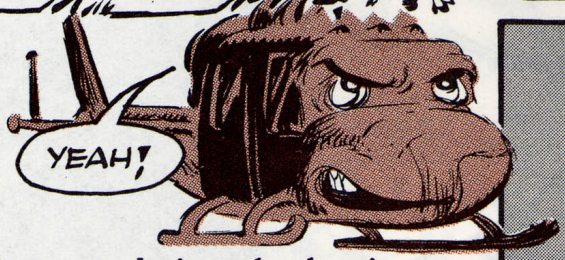
It takes only 30 minutes to remove and replace all the bolts with this ratchet instead of the one-and-a-half hours required when using wrench, engine latch keel, P/N 22E5902-3. The difference is that the fabricated tool will turn the bolt completely without having to remove the tool after each 1/6th of a turn. And three out of every four keels removed have bolts that are too tight to screw in and out by hand.

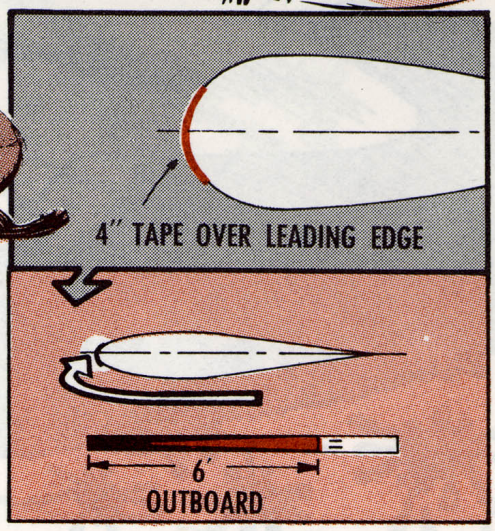
Lt W. L. Strum
Ft. Eustis, Va.



(Ed Note—I'm with you. Why kill yourself over keel bolts? But I'd still use the engine keel wrench to break the bolts loose before switching to your ratchet for the rest of the job. Might also consider machining out a ¼-in square hole in the hexagon stock to receive the ¼-in ratchet to give you a stronger tool and more working room.)

TAPE THE BRAVO TOO





If you've been wondering why there's a rotor blade vinyl tape called out for the Alpha version of the Iroquois (UH-1A), but none for the Bravo (UH-1B), it was an oversight.

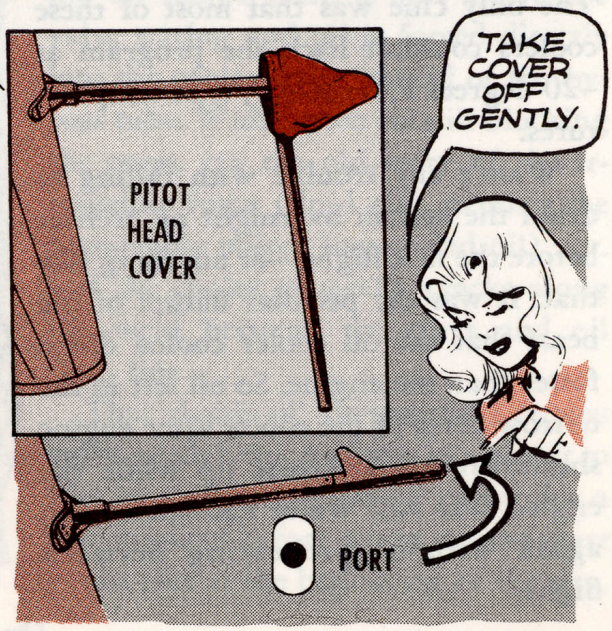
TM 55-1520-207-20 (Sep 62) allowed it on the Alphas in Chapter 2, Section V, Page 5-3 . . . but TM 55-1520-208-20 didn't mention this tape. The TM 55-1520-211-20P (10 May 63) went to press without the scoop, too. But a later revision scheduled for publication Sep 63 to the -20P will carry the No. 455 four-inch tape for both series under FSN 8030-664-4894 as a local purchase item.

FSN 8030-664-4894 is described in Federal Supply Catalogs C8000-SL and C8000-ML as a 50-yd long, 4-in wide roll.

The 4-in wide strip should be centered on the leading edge so that it extends back the same distance on both top and bottom surfaces. Use it only on the outboard six feet of each blade.

CARESS THAT (PITOT) COVER

It can happen! Maybe not too often, but pieces of the pitot tube cover have been known to stick in the port at the end of the boom. Result: Wrong airspeed reading. Cause: Careless hands. Too much of a rush can tear up the inside of the cover by catching it on the sharp edge of the boom tip, breaking off some of the fibers. That's also why all worn covers should be replaced ASAP.



THE STRANGE CASE OF...

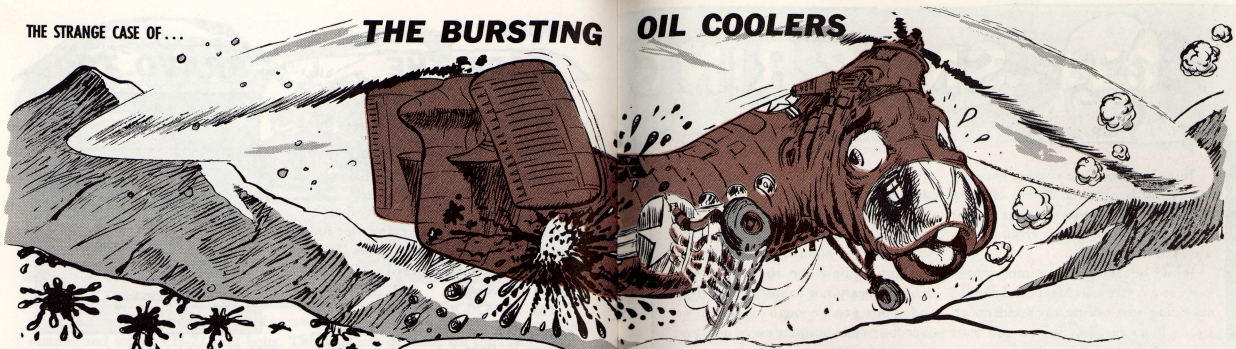
THE BURSTING

Strange tales are told of things that happen to men and machines in the frozen wilds of the Far North . . . where subzero temperatures play tricks unknown to mechanics who've never worn parkas.

One of the most interesting cases to show up recently in the land of bushy-tailed engines concerns the bursting of Shawnee (CH-21) engine oil coolers. The only clue was that most of these coolers couldn't hack the program at –20 degrees F, or below, type temperatures.

Wasn't any trouble with failing to drain the system overnight or preheat before the first flight—or anything like that. It was the peculiar nature of the beast that the oil cooler cooled down faster than the engine. So oil left in the narrow cores of the cooler after engine shutdown would freeze up while the engine was still warm enough to run again without preheating between flights.

THE BURSTING OIL COOLERS



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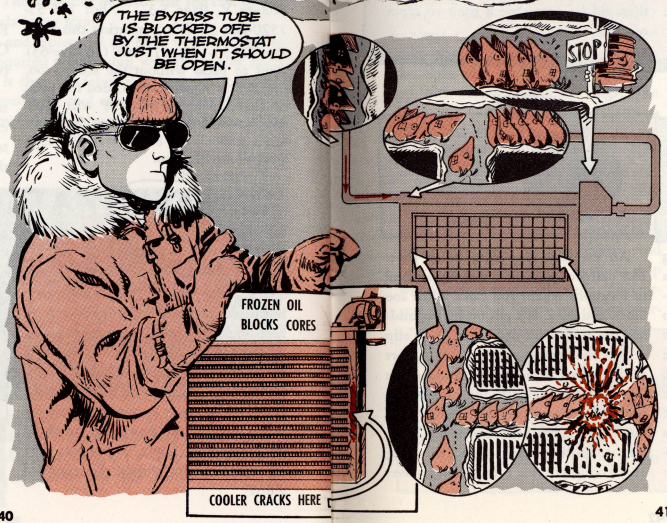
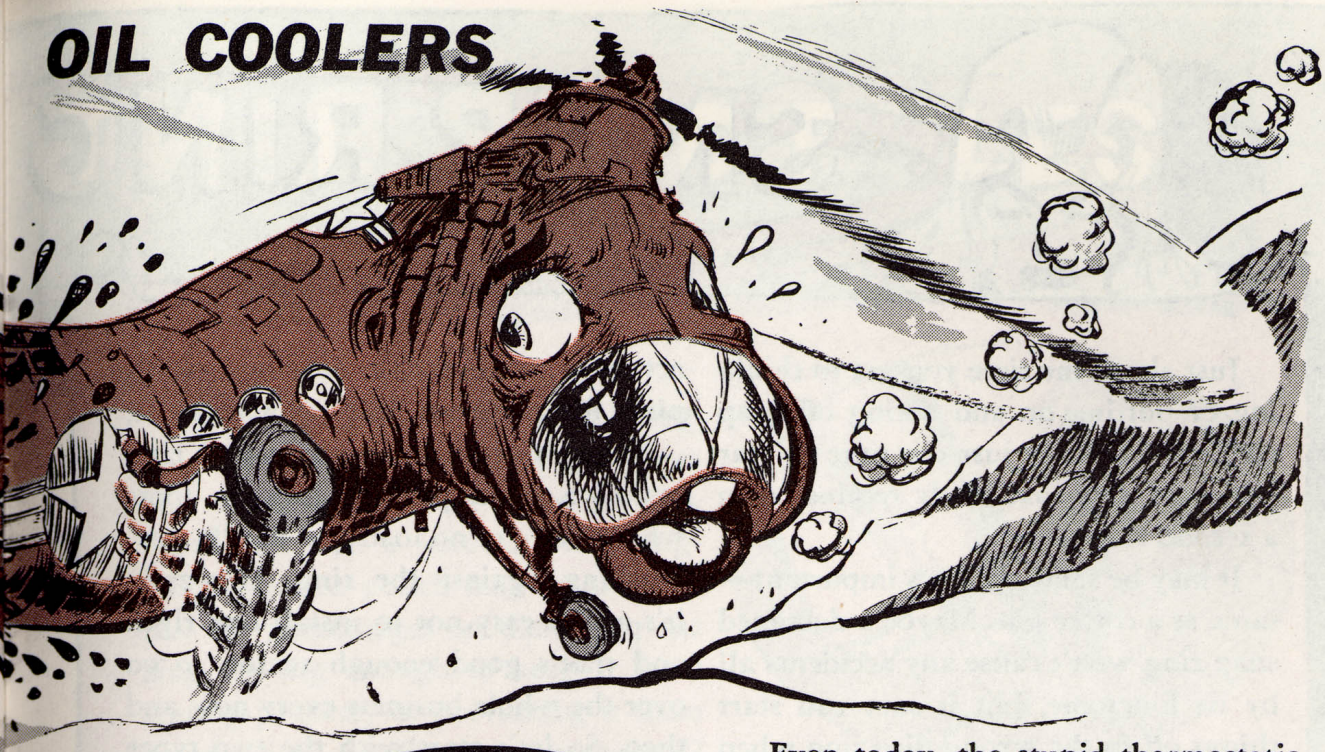


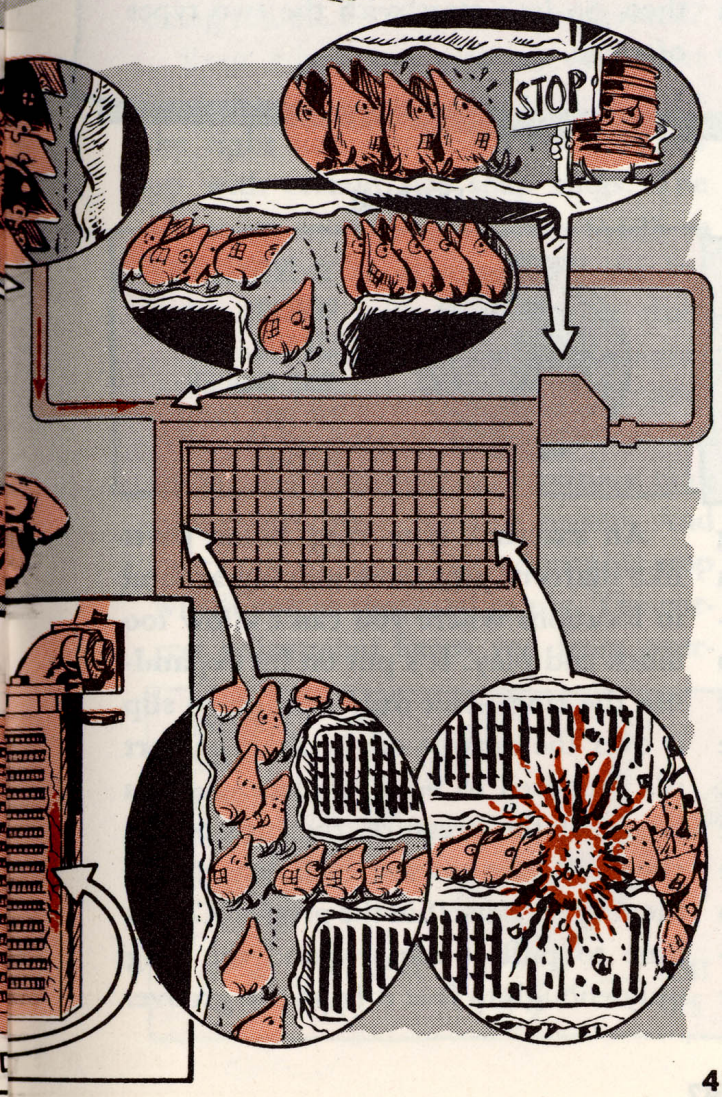
Even today, the stupid thermostatic valve controlling oil flow to the cooler doesn't know the oil cooler and engine oil sump cool off at different rates. So it keeps the cooler bypass tube blocked off until engine oil temperature starts dropping below 71 degrees C (160 degrees F).

Next thing you know, the same engine's run up for another mission while the oil temperature is still above the valve setting and oil is forced directly into the cooler cores instead of the bypass tube. With frozen oil still blocking the cores, it's the old story of the irresistible force (fluid oil) meeting the immovable object (congealed oil) . . . and the cooler generally cracks along the weld between the cores and oil feed line.

That dumb ol' thermostatic bypass valve needs help. And you can give it to him by preheating the oil cooler for a few minutes before every engine start —not just at the beginning of the day.

OIL COOLERS





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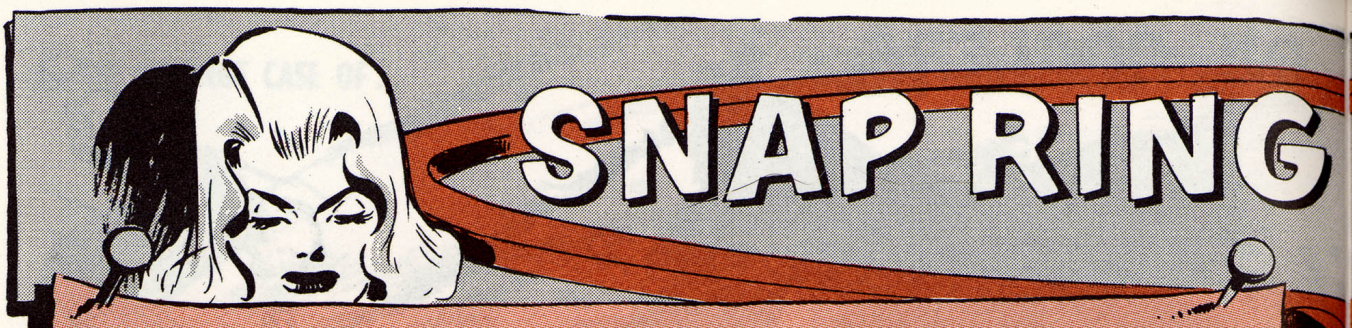

Just about the time you get to thinking of putting on and taking off snap rings as a snap is just the time to rear back and give that lowly retainer ring a second think.

It may be small, but it's important—same as a cotter pin. Maybe a damaged snap ring won't cause any accidents all by its lonesome, but it sure can start things off in the wrong direction when it's not doing its job. And its job is to act as a retainer for bearings, seals, pins, filter screens and—you name it.

When it's installed right, a snap ring makes a good positive lock in spots where there're no loads, or hardly any, working against the ring. However, it's awful easy not to install one right and that's good enough reason to go over the whole business every now and then. So let's start with the two types of rings.

INTERNAL

An internal retainer, or snap ring is used to keep some part, such as a filter screen, from moving around inside a housing. So you install an internal ring by **compressing** it—but **only** enough to let you place it into the retaining groove inside the housing. Then, as you let up on the pressure, the ring will expand itself into the groove like it had a mind of its own. You also remove it by compressing, but again—**only** enough to clear the ring from the groove and housing cavity.

EXTERNAL

An external type ring holds parts like shafts or pins from moving around in locations where you can't allow too much end play. It's put on by **expanding** the ring—but **only** enough to slip it over the outside of the shaft or part it's supposed to hold in place. As you let go of the pressure, the lugs of the ring will ease toward each other until the ring seats itself in the groove. Comes time to pull it out, expand the ring **only** enough to free it from the groove.

SNAP RING TOOLS AND RULES

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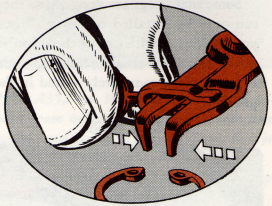
PLIERS

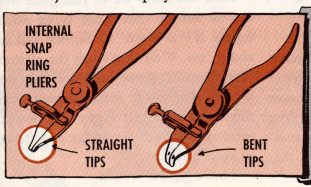


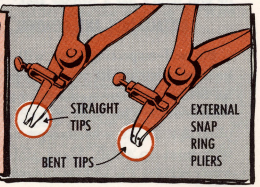
Internal and external retaining ring pliers are the only—repeat only—types of tools to use on these rings. Sure! A substitute like a screwdriver, long-nosed plier or punch may do the job. But the percentages on damaging the ring are big enough to keep it from seating properly or preventing it from being reused. So what have you gained?

Even when you pick up the right type pliers, you've still got to be sure it's the right size, since each size matches up with certain size snap rings. The range on snap rings is from 0.125 to 5.177 inches in diameter and the lug holes change with the different sizes.

If you check back over your Army Aircraft Organizational Maintenance ABC Tool Kits, you'll see three external and four internal retaining ring pliers authorized for this reason. And every one of 'em has an adjustable stop which you're supposed to use. The correct adjustment keeps you from over-expanding external rings and overcompressing internal rings. Taking time to adjust the stop is quicker than running back to the parts room for a new ring to replace the one you ruined.

Your issue pliers are all flat-jawed with straight tips. However, there're other retaining ring pliers with bent tips and round jaws. So if you ever think a particular job calls for the other kind of tip or jaw, the correct way to ask is by using the rules set up by AR 725-50, after you locate the right FSN in the 5120 Federal Stock Class catalog.





MORE

TOOLS AND RULES

PLIERS

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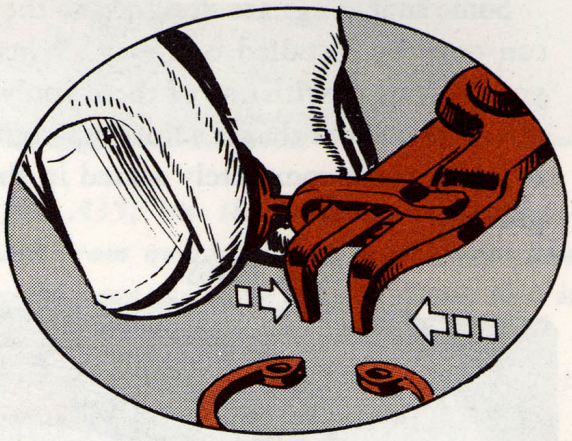

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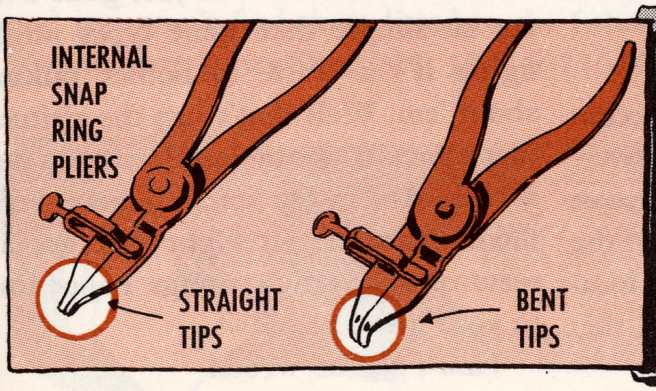
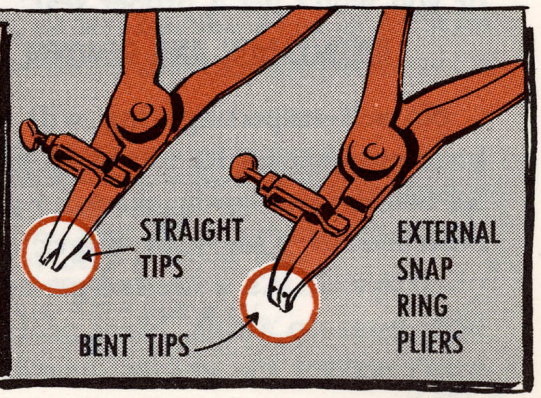
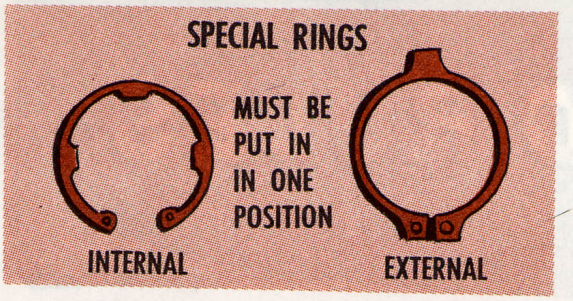


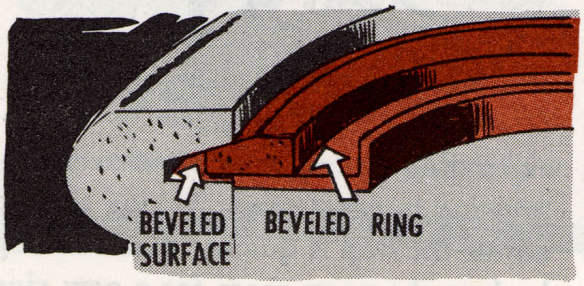


P.S. MORE



Some snap rings are designed so they can only be installed one way. When you're dealing with one of these you've got to first check that it's lined up right in order to be completely seated in the groove.

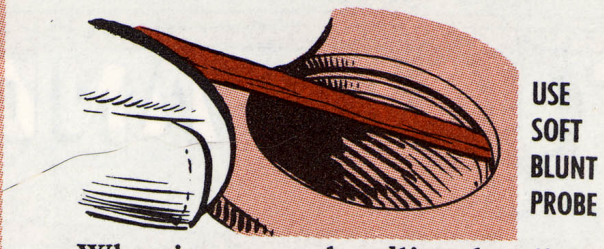
BEVEL RINGS



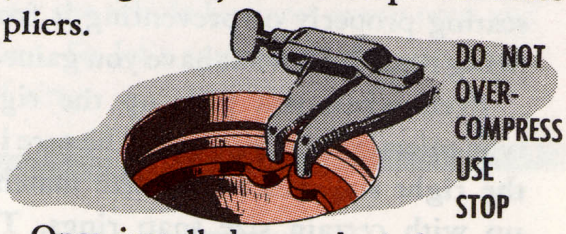
The bevel shaped ring has two jobs. It holds the part in the assembly and also acts as a self-adjusting wedge between the groove and the part it's holding. It controls end play by keeping a constant wedging pressure against the part being held in place while compensating for parts wear. If you run up against any of these, be sure the bevel side of the ring bears against the bevel surface of the retaining groove, or you won't get a proper seat.

INSTALLATION AND REMOVAL

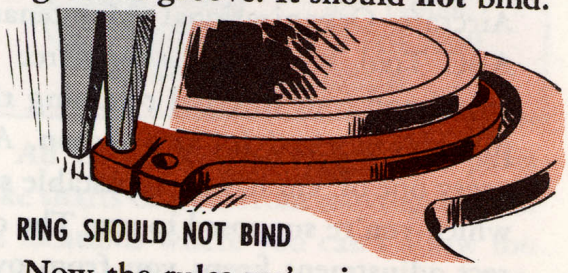
No self-respecting ring will accept boarders sharing its retaining groove. So, before installation, check for groove obstructions with your finger or the plier tips. If it's a hard-to-get-at location, hunt up a soft, blunt probe that won't scratch the groove innards.



When it comes to handling the pliers, mate the tips to the lug holes in the ring or the ring may slip off before it even reaches the groove. On internal rings, overcompressing until the lugs overlap is a good way to pop the ring off the pliers and a very good way to damage the ring . . . same with over-expanding external rings. That's why you've got adjustable stops on those pliers.

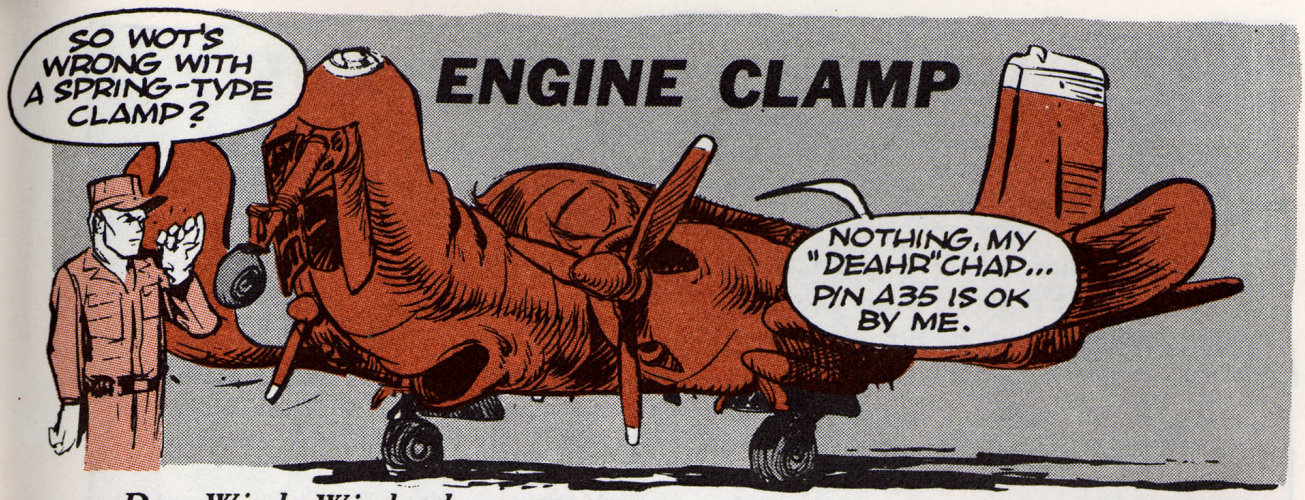


Once installed, you don't know the ring's well seated in the groove until you check it by poking a plier tip into one of the lug holes and rotating the ring in the groove. It should **not** bind.



Now the rules we've just gone over are so simple that some types might figure it's a waste to bother talking about 'em. Well that's just the attitude that allows a sloppy installation to pop a ring. And when internal parts start floating around in flight you get all sorts of interesting things happening to your aircraft.

That's all she wrote!



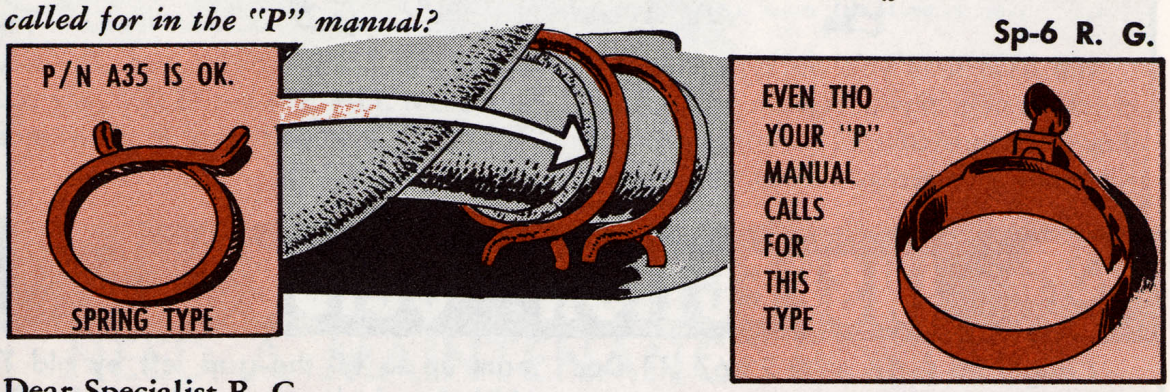
Dear Windy Windsock,

We've spotted spring-type clamp, P/N A35, on the intake manifold-to-cylinder tubes of 0-480-1 engines just back from overhaul. It doesn't seem like any self-respecting Seminole (RU-8D) would have the same type of clamp that is usually used on ground vehicles!

A check of our TM 55-1510-201-20P (10 Jul 62), Chapter 2, Functional Group 03, on page 2-349, shows that the clamp should be an AN737RM74.

Is the spring-type clamp reliable or should we take it off and use the one called for in the "P" manual?

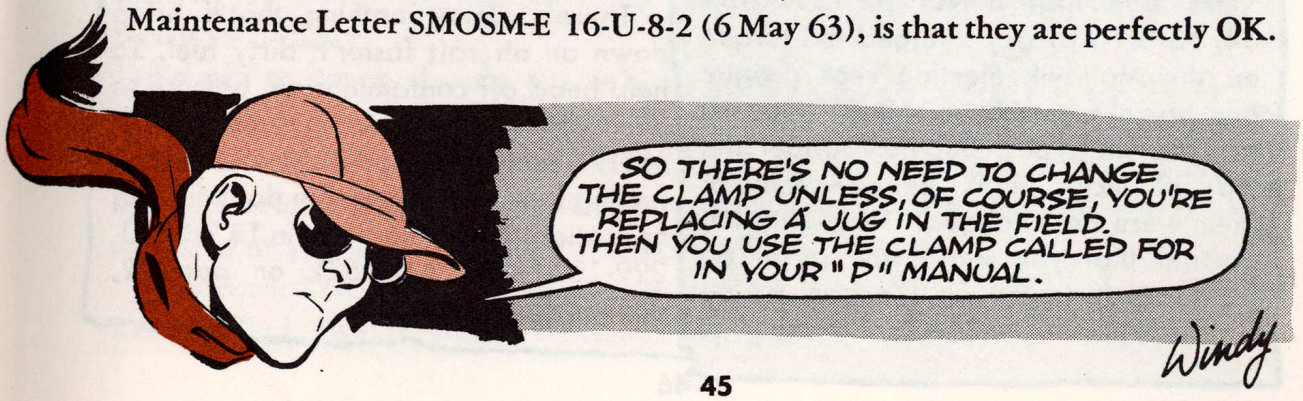
Sp-6 R. G.



Dear Specialist R. G.,

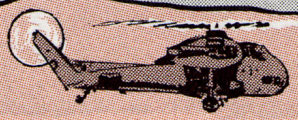
True—some engines are coming through with the spring-type clamp. On the "luxury" U-8F model, for example, you'll even find them at other places besides the intake tubes. Other birds also use the clamp.

It's also true that you can't find the spring-type clamp in the "P" manuals . . . and you won't find them listed in the future, either. But the word in AVSOM's Maintenance Letter SMOSM-E 16-U-8-2 (6 May 63), is that they are perfectly OK.



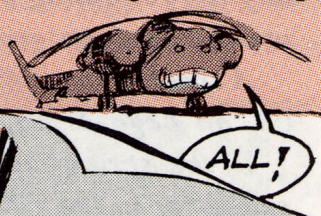
CARIBOU LANDING CLUE

Each Caribou (CV-2) -10 should have a copy of TB 55-1510-206-10/2 (15 Nov 62) attached. It may only be a reminder on "Application of Brakes" at touchdown, but if it protects even one center wing section from being overstressed then it's well worth repeating. This is the formal TB follow-up on AVSOM message SMOSM-EAC-1 09-02490 (21 Sep 62). Make sure you've got enough to go around.



HIT 'EM ALL

Any air type who's been around a Mojave (CH-37) a spell knows it takes a heap of elbow grease to hit the umpteen grease fittings on the main rotor head. 'Course each one is mighty important. Like TWX TCMAC-EH-37-11-3454 (29 Nov 61) pointed out—a lack of grease in the damper trunnions has resulted in several pin failures. So be sure you hit **all** the fittings according to the lube chart.



NEW PUB

The next time you air types want to check an item in your A, A Supplemental, B or C Organizational Maintenance Tool Kits with the supply manual, don't reach for the old SM 9-4-5180-A05. The new pub is SM 55-4-5180-A08 (28 Nov 62), "Tool Set, Organizational Maintenance, Army Aircraft."

INSPECTION GUIDE

Caught up to TB AVN 23-67 (11 Dec 62) yet? It spells out the latest "Army Aircraft Maintenance Inspections Procedures." This new TB and TM 38-750 team up to fill the gap left by old TB AVN 5, which was rescinded by DA Circular 310-54 (1 Feb 63).

CHANGE STENCIL

It's true that MWO 55-1510-204-34/43 (27 Apr 62) changed the torque on the Mohawk ejection seat drogue gun barrel from 30 to 160 inch-pounds for you air types. But how about the old 30 inch-pounds stencil—some of them were not changed! 'Tis mighty important that you stencil the new 160 inch-pounds figure on the gun casing . . . soonest.

DAILY CHECK

There's almost nothing that'll bring down an aircraft faster'n dirty fuel. To help head off contamination, be sure to eye the meter screen in your M49C, M217C and GMC model HC 453 aircraft fueling tankers—before the daily fueling operation. That's the poop in TB 9-2300-229-10/1 (15 Aug 62), on page 2, paragraph 6.

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 3-240, May Field Behavior, CBR Agents.
TM 3-1040-220-12, May Dispenser, Riot Control, M5.
TM 3-4240-202-25P, May Mask, CBR, M17.
TM 5-3810-207-20P, Apr Crane Shovel Quickway M200.
TM 5-4310-215-25P, May Compressor, Air, American Brake Shoe Model G-331.
TM 5-4310-221-15, May Compressor Briggs & Stratton Model 234.
TM 5-4310-248-15, Apr Compressor, Air-Kellog-American Model B-352-B.
TM 5-6115-204-20P, Apr Generator Set, 10KW John Reiner Model GGG-10-AC-2.
TM 5-6115-217-20P, Apr Generator, Model 15-US-10327B-A.
TM 5-6115-237-20, May Generator, Consolidated Diesel Model 4115.
TM 9-1400-514-15, May Hawk, Ground Handling Equip.
TM 9-2320-211-20, Mar Truck, Chassis: 5-Ton, G744-series, M39, M40.
TM 9-2320-218-20, Apr Truck ¼ Ton, M151.
TM 9-2350-224-20P, May Tank, M48A3 W/E.
TM 9-2590-209-14, Apr Bulldozer, Tank-M1, M9.
TM 9-6625-330-12, Apr Auto Elec Cir Test Set Model 127 and Model TO-100-A.
TM 9-6920-210-14, Feb Targets, Material and Training Layouts.
TM 9-6920-312-12, May Sergeant, Training Devices (A11).
TM 10-1670-222-23P, Apr Parachute, Cargo, Type G-12D.
TM 10-1670-223-23P, Apr Parachute, Cargo, Type G-13.
TM 10-3930-227-20P, May Truck, Lift, Fork, MHE 177.
TM 11-4920-203-12, Apr Test Set, Automatic Pilot AN/ASM-65.
TM 11-4940-208-15, Mar Maintenance Van for Computer Set, Digital Data, General Purpose AN/MYK-1 (V)-MOBIDIC-D.
TM 11-5805-330-20P, May Monitor Group Telegraph AN/FGA-6.
TM 11-5820-453-10, May Radio Sets AN/GRC-87 and AN/VRC-34.
TM 11-5820-453-20, Apr Radio Sets AN/GRC-87 & AN/VRC-34.
TM 11-5820-471-12, May Receiving Set, Radio AN/MRR-4B.
TM 11-5820-472-20P, May Transmitting Set, Radio AN/FRT-53A.
TM 11-5965-266-25P, Apr Headset Microphone Kit MK-525/G, 526/G.
TM 11-6125-237-14, Apr Motor-Generator Set PU-520/G.
TM 11-6140-207-20P, May Battery Assembly BB-426/U.
TM 11-6625-419-20P, May Oscilloscope OS-72/U.
TM 11-6625-541-12, May Simulator, Antenna Position SM-154/MPQ-4A.
TM 11-6625-561-12, May Test Set, Radar AN/GPM-46A.

MISCELLANEOUS

DA Pam 310-22, C2, May.
LO 9-2330-212-12, May Nike-Ajax, Nike-Hercules, Nike-Hercules (Imp), Vehicles.
LO 9-2330-246-12, Apr Semitrailer, Van, Elec M348A2, M348A2C, M348A2D, M348A2F, M348A2G, M348A2H, M373A2, M373A2C
SB 11-555, May Addition of Stripper, Wire Hand, Automatic, to Tool Equipment TE-111.
SM 3-C6800-IL, Jul Chemicals and Chemical Products.
SM 3-1-4200, Apr Fire Fighting, Rescue, and Safety Equipment.
SM 5-4-3820-515, May Pneumatic Tool and Compressor Outfit.
SM 5-4-4620-506, Nov Distillation Equipment Set, Water.
SM 9-C5310-ML, May Nuts and Washers.
TA 50-971, Apr Allowances of Expendable Supplies AR.
TB 9-1300-248, May Assembly of Time Fuzes to Projectiles.
TB 9-2300-261-10, May Oper of Veh in Hilly Terrain.
TB 34-9-141, May Countersunk Screw Heads for Aeronautical Fasteners.

MODIFICATION WORK ORDERS

MWO 55-1510-204-34/32, Jun (OV-1).
MWO 55-1510-204-34/64, Jun (OV-1).
MWO 55-1510-204-34/65, Jun (OV-1).
MWO 55-1510-206-34/32, May (CV-2).
MWO 55-1520-202-34/21, May (CH-34).
MWO 55-1520-207-34/57, Jun (UH-1A).
MWO 55-1520-209-20/2, Jun (CH-47).
MWO 55-1520-209-34/4, May (CH-47).
MWO 55-1520-211-20/4, Jun (UH-1B).
MWO 55-1520-211-20/5, May (UH-1B).
MWO 55-1520-211-20/6, Jun (UH-1B).
MWO 55-1520-211-34/1, May (UH-1).
MWO 55-1520-211-34/3, Jun (UH-1A).
MWO 55-1520-211-34/6, Jun (UH-1B).
MWO 55-1520-211-34/8, Jun (UH-1A).
MWO 55-1520-211-34/12, May (UH-1B).
MWO 55-2800-200-50/5, Jun (OV-1 & UH-1).

NEED A MAINTENANCE POSTER?

You can get 'em now . . . posters on maintenance.

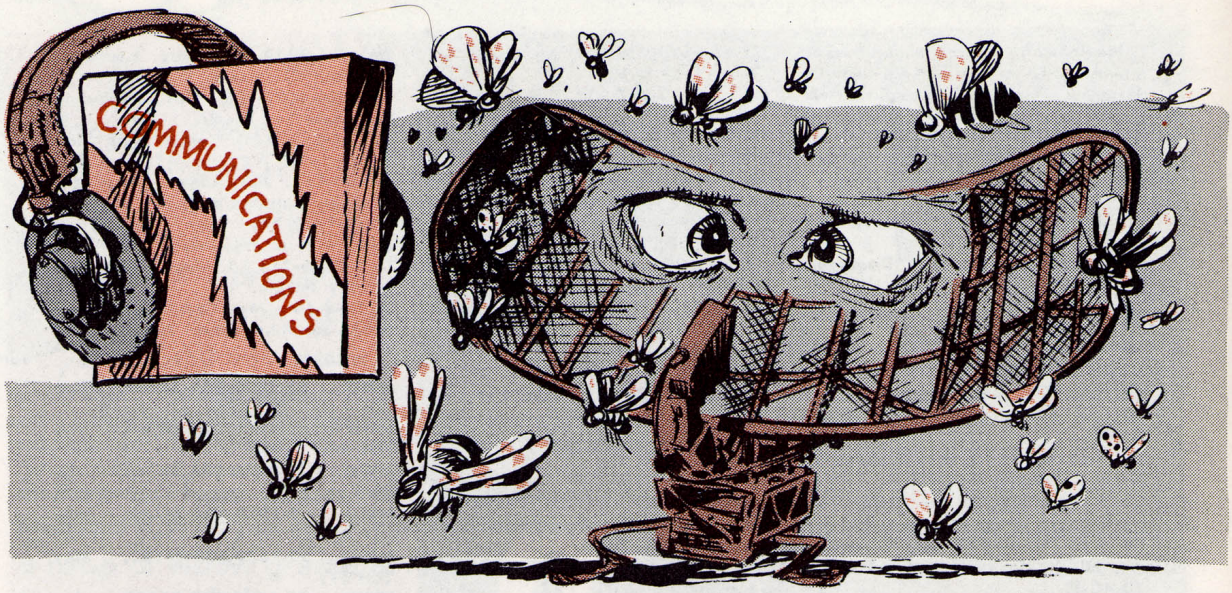
They're in the DA 38-series and emphasize keeping Army equipment constantly ready for combat. They came about from Operation ARM—Army Ready Materiel.

These 38-series posters are intended to be displayed anywhere they will be seen by anybody who has anything to do with Army equipment—and that means everybody.

To get the ones already out, whip up an order on DA Form 17 for DA Posters 38-1, 38-2, 38-3 and 38-4.

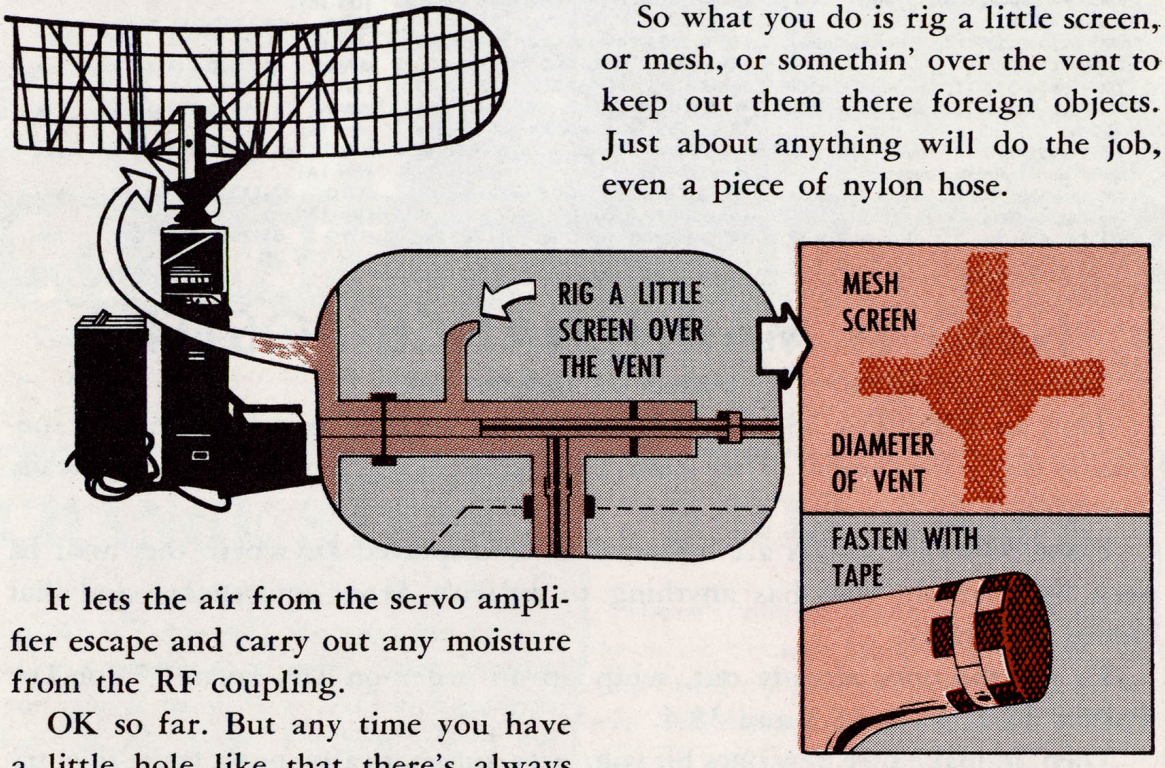
Then, to make sure new ones hit your area automatically, put a write-in entry for "38-series Posters" on the DA Form 12-4 your outfit sends to the publications center. You'll get them by direct mail.

The Form 12-4 goes thru channels to the U.S. Army Publications Center, 2800 Eastern Blvd., Middle River, Baltimore, Md., 21220.



MAYBE EVEN GREEN HORNETS

Behold that little air vent on the RF856 coupling on the antenna of your AN/TPS-1( ) radar set.



It lets the air from the servo amplifier escape and carry out any moisture from the RF coupling.

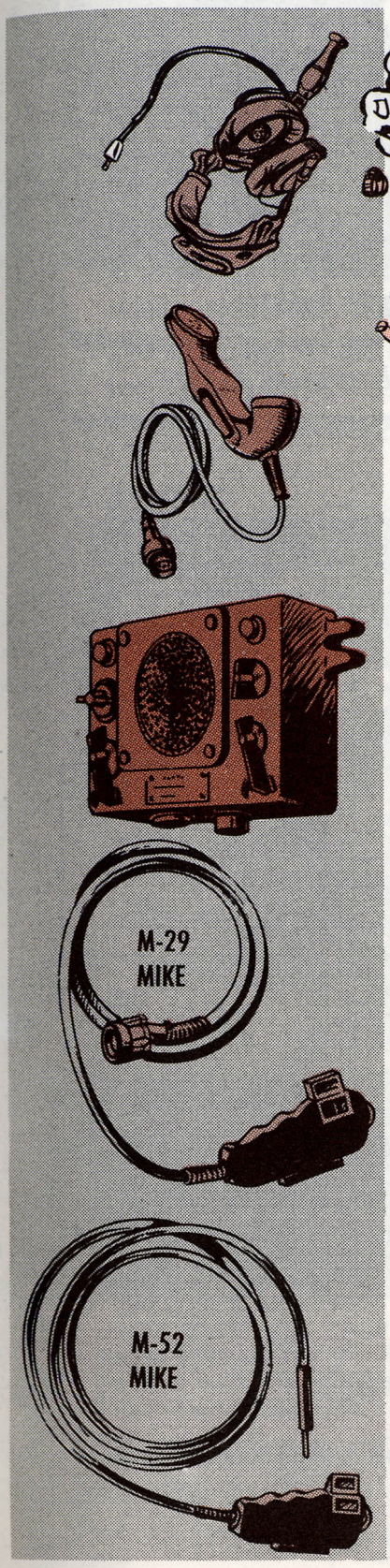
OK so far. But any time you have a little hole like that there's always something trying to get in . . . insects, bugs and other hopping, flying and crawling creatures.

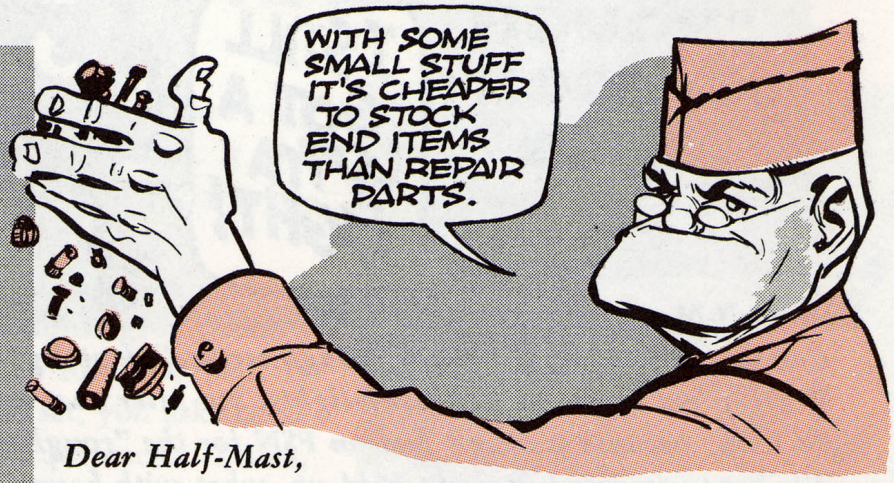
What they do in no time at all is short the inner conductor to the outer conductor, causing flashover and damage to the components of the set.

So what you do is rig a little screen, or mesh, or somethin' over the vent to keep out them there foreign objects. Just about anything will do the job, even a piece of nylon hose.

Just make sure that what you use isn't so tight-woven or thick that it hinders the air flow and keeps the moisture from being carried out.

WHERE'RE THE REPAIR PARTS?





Dear Half-Mast,

Seems to me that parts for small items like headsets, handsets, speakers, control boxes and such are gettin' harder and harder to come by.

What's the deal?

Fact is, it's got to the point where we either cannibalize or order the whole new end item to stay in business.

Hardly seems natural to me to dump a handset just because we can't get one small part.

Sgt D. B. M.

Dear Sergeant D. B. M.,

It does seem "natural", Sarge, once you get the whole picture. And it's gonna happen more and more because stocking a lot of little repair parts can be a mighty expensive deal.

In short, stocking only the end item can save money, time and energy . . . which go to better use somewhere else.

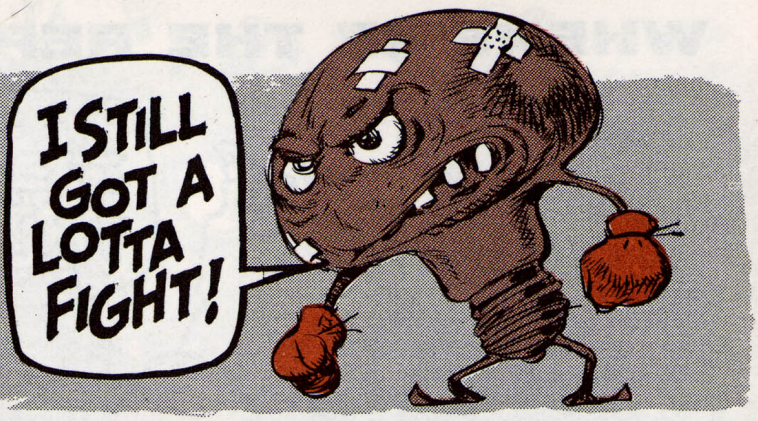
Take the M-29/U and M-52/U microphones, f'rinstance. Maintenance parts for the mikes will be dropped —since it costs less to stock the complete mikes than it does the parts.

So-o-o, when the parts are used up, the mikes can be maintained by cannibalization. When this is no longer possible, you requisition a new mike.

Before you bounce that around, note this: It's not because somebody's decided sudden-like that there's lots of cash to spare. It's just when you match the cost of the end item against the costs of parts, storage, tools and what have you, the end item comes out on top.

Half-Mast

"ROUGH SERVICE" BULB



Dear Half-Mast,

Can you dig up any FSN's for "rough service" drop-light bulbs?

We get 'em with our new drop-lights, but after that we have to use regular light bulbs because we can't find an FSN for the "rough service" bulbs.

The replacements just don't hold up, what with bouncing around and other routine treatment.

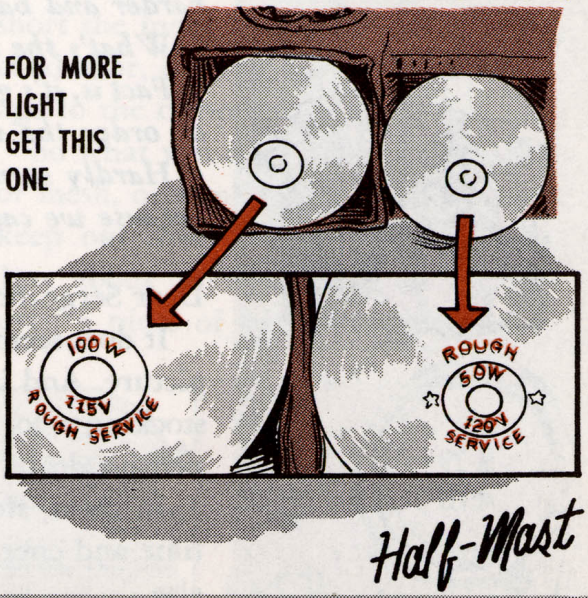
CWO M. L.

Dear Mister M. L.,

The FSN you want for the 50W bulb is 6240-155-8634, bulb, filament, A-19. Might be a good idea to tack on "Rough Service," too.

For more light you can get the 100W job under FSN 6240-143-3094, bulb, filament, A-23. They're both in SM 5-1-6110 thru 6685 (Sep 62).

If you deal with a Self Service Supply Center, they may have them. Otherwise, order through your Engineer or consolidated troop support.



Half-Mast

FOR OVERHEATED HOSES

SB 11-554 (25 Jan 63) is what you need if the AN/FRT-51 transmitter's your baby. It gives you the scoop on getting a neoprene air duct hose assembly to replace the rubber one on the AM-1154A/G amplifier. The rubber assembly just can't stand the heat in the RF amplifier.

SB ON THE TE-49

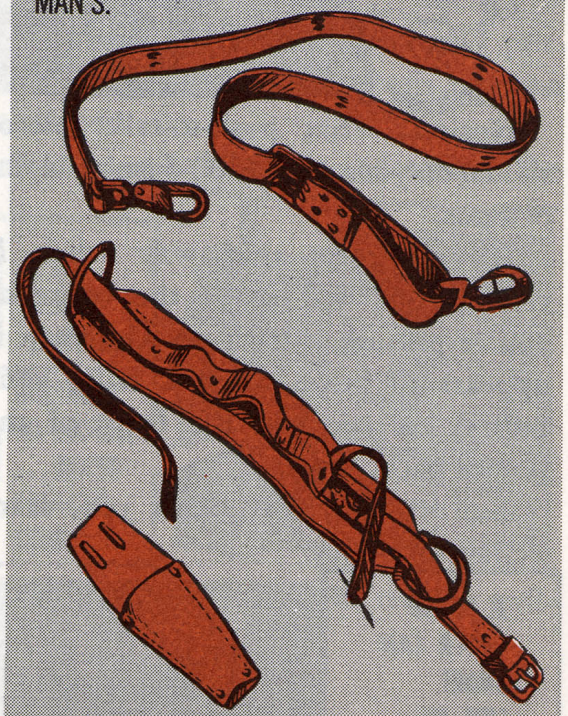
If you use a Tool Equipment TE-49 (FSN-5180-408-1863) take a look at SB 11-539 (May 62), "Conversion of Tool Equipment TE-49." It adds some items, drops others, and reduces the total from 83 to 50 items.

GROUNDMAN'S EQUIPMENT, TE-23

One, two, three and that's all. Doesn't sound like many tools. It isn't the number but the kind that's important.

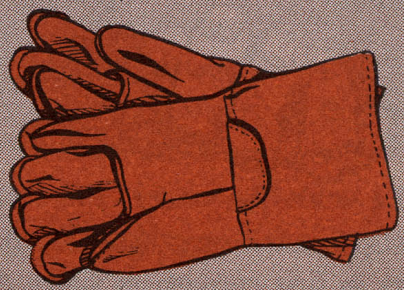
The TE-23 groundman's equipment is made up of individual groundman's wire equipment. It's for MOS 321. If you need the whole set, you ask Signal for Groundman's Equipment, TE-23, FSN 5180-408-1242.

BELT, SAFETY, INDUSTRIAL LEATHER, LINEMAN'S.



FSN 4240-684-7317	CHEM

GLOVES, LEATHER, work type, men's, cowhide, gauntlet cuff, cream or light gray, Fed KK-G-476 (size small).



FSN 8415-274-2431	QM

PLIERS (TL-661)

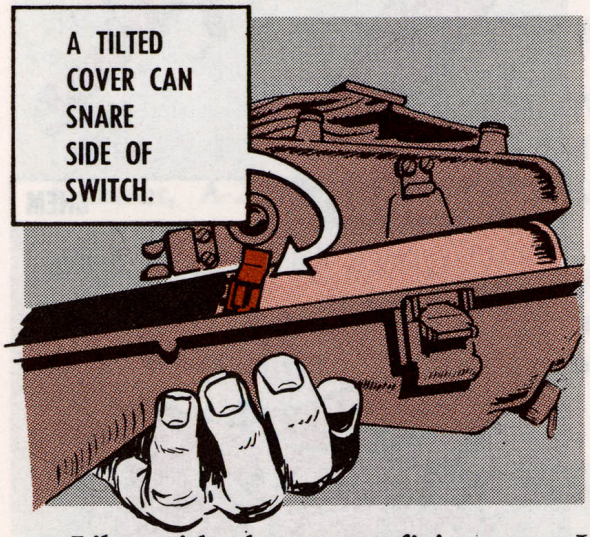
FSN 5120-555-8953	QM

SWITCH SAVERS

Nosiree. That push-to-talk microswitch on your AN/PRC-6 isn't playin' octopus.

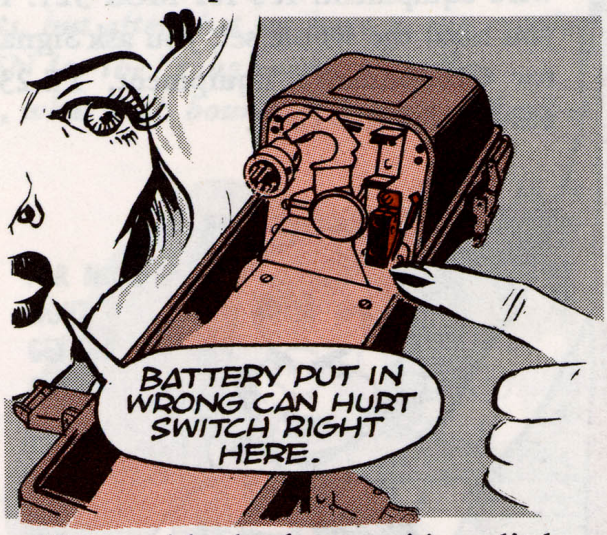
It may seem that way when it reaches out and snags the cover as you're putting it back on. Or when it appears to jump out and bang your battery as you slip the front of the power pack down.

But it's not, really. It's you, man, believe it or not.



Like with the cover, f'rinstance. If you slip it back on the set at an angle, it tilts in just enough to snare the side of the switch. So you break the switch or bend it so bad it won't work.

You gotta square up the cover first. Grab a look to see that it clears the switch, and slip it on.



Now, with the battery it's a little trickier. You just don't slam the front end of the battery down without checking the whereabouts of the rear end. Front first'll mean the edge of the battery might catch the switch and damage it.

So . . . after pushing the socket end of the battery against the retainer disk (like the TM says), be sure the rear end's clear of the case. Then you can press the whole business down together.

Nothin' fishy 'bout that, is there?

PRC-6 BATTERY RETAINER

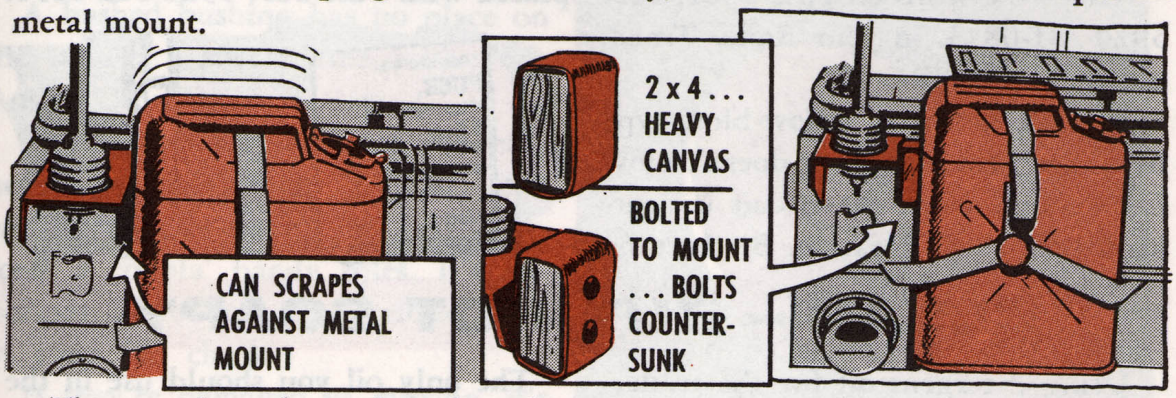
Here's a hot little number you can jot down if you're looking for a Battery Retainer for your AN/PRC-6 radio. FSN 6135-392-6606 replaces the FSN listed in your TM 11-5820-355-20P (25 Jan 60).

ANTENNA RUB WEARS CAN

Dear Editor,

The gas can strapped to the rear of the M151 quarter-tonner won't stay put. It slips and crowds the radio antenna mount. On these rough roads the can quickly ends up the loser—with a hole in its side.

Even with the strap tightened all the way, the can slides left and scrapes the metal mount.



The can also rubs against the cable's connector cover when the truck's pulling a trailer.

We've got a fix that'll soften the rub and save the can:

A piece of 2 x 4 can be easily bolted to the side of the mount.

The block of wood is shaped to the side of the antenna mount, padded and covered with a couple of thicknesses of heavy canvas. The bolts are counter-sunk.

Lt. L. M. Wilson, Jr.
94th Ord Co

(Ed Note—Sounds OK—you gotta save that can. But, before you install a radio on the M151, best check SB 11-131 (Jul 61), "Distribution of Vehicular Radio Sets." On pages 63-64 it lists FSN's you need for ordering the instructions for installing radio equipment on the M151. Also, when you get one of the newer M151's you'll find a better harness arrangement holding the can.)

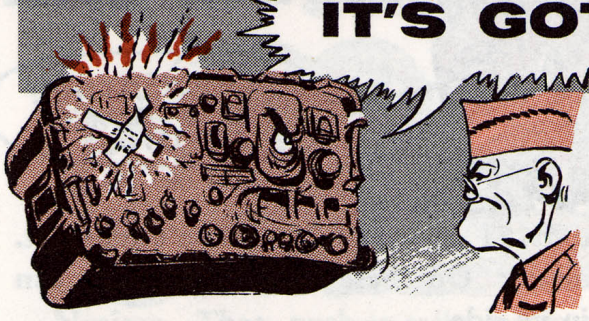
REEL QUICK FIX

Been losing the corner braces of your RL-39 ( ) reel unit while you're playing out or recovering telephone field wire? Your unit mechanic or support unit can put a stop to that by spot welding the braces to the frame.

A GOOD MAST IS A MUST

SB 11-544 (8 Aug 62) is your answer if you've been having half-mast problems with your AN/GRN radio beacon set. It authorizes the use of three AB-155/U masts to replace the fragile AB-360/G masts.

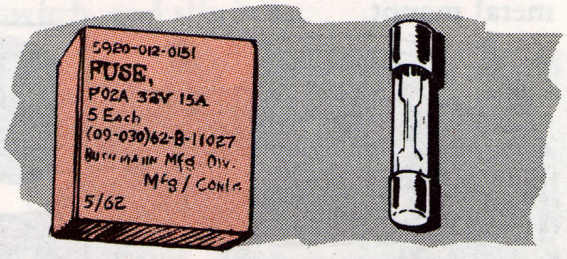
IT'S GOTTA GO



That's the word on Fuse F601, FSN 5920-281-0813, in your Radio Transmitter T-195/GRC-19.

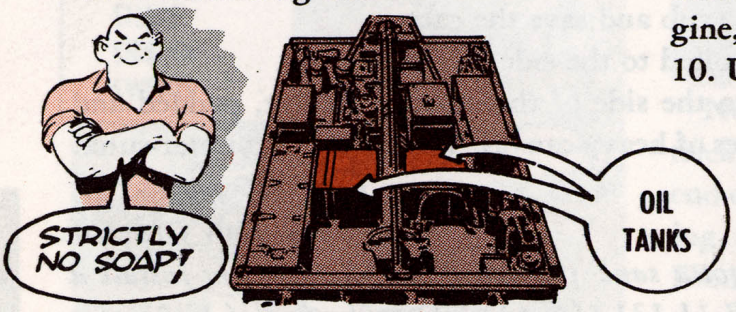
Trouble is this is a slow-blow type fuse. And because it is, it doesn't blow fast enough when the circuit is overloaded for short duration. By the time it does, the insulation on the wires in that circuit are already hurting from overheating.

What's needed is an instant-blow type fuse. So, give a holler to your support and tell them you want F601 replaced with Fuse FSN 5920-012-0151.



CLEAN — BUT NOT SOAPY

Using detergent oil for the trailer-mounted mast of your AN/MMQ-1( ) wind measuring set?



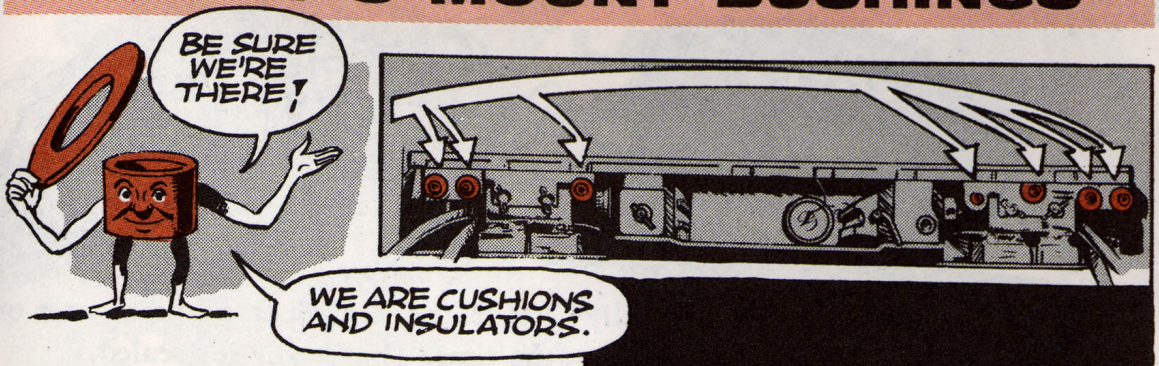
Detergent oil can ruin the oil seal in your AB-328A/M or AB-328B/M mast.

The only oil you should use in the oil tanks (24 gallons or so) is Lubricating Oil, Internal Combustion Engine, MIL-L-2104, Military Symbol OE-10. Use these FSN's:

NEW TUBE FOR AN/MPS-23

If you have an AN/MPS-23 radar set, then you need electron tube, Type 7462 MIL, FSN 5960-752-5460. It replaces electron tube FSN 5960-843-4582. SB 11-552 (4 Feb 63) gives you the dope.

ANGRY-3 MOUNT BUSHINGS



A bushed bushing has no place on the mount brackets used with your Angry-3 thru -8 radio sets.

Those bushings—part of the connector retainers on the MT-297, -298 and -299/GR mount brackets—perform a coupla' handy roles. It's important to you not to overlook them in your PM check.

If they're damaged or missing, it's time to call in the repairman to replace 'em.

The rubber bushings serve both as insulators and cushions when you attach cable connectors to 'em (when the cables aren't hooked to the set components).

F'rinstance, if the bushing on the retainer that holds the power-in connector is damaged or missing—and the power's on—the positive (+) prong shorts to ground. Meaning, you short out the power-in connector.

The bushings also provide cushions for the pins of the connector heads and can keep the pins from bending or breaking. That's extra important protection if the cables are snagged when they're hooked to the connector retainers.

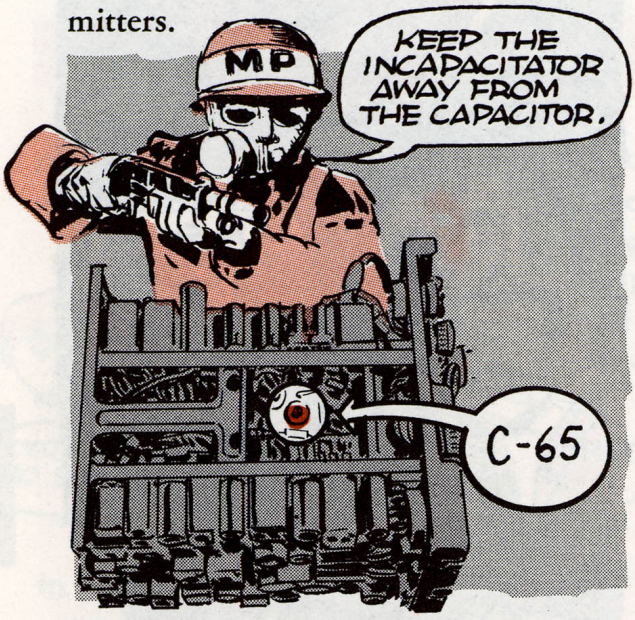
And anybody'll admit that good connector retainers make handy storage hooks in keeping the cables from flailing around a vehicle when they're not attached to a radio component.

Which means, get your support to install new bushings when the old ones no longer are fit to do their jobs.

UH, OH... THE INCAPACITATOR

You've met the type. He's usually stickin' his nose around some corner, grimy screwdriver or wrench in hand.

Waiting you out, he is, just so's he can fiddle with that radio set you're workin' on. Why, this guy would even tackle the C-65 neutralizing capacitor in your RT-66 thru -68 receiver-transmitters.



He'd get at that C-65 even if he had to break the seal on it to turn the control.

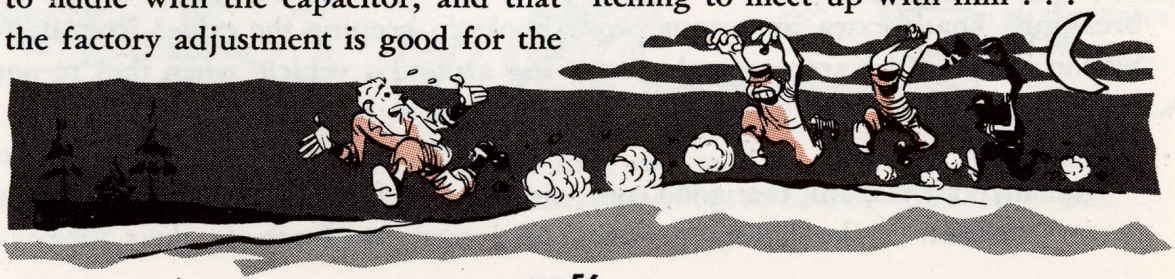
Now, you know you're not supposed to fiddle with the capacitor, and that the factory adjustment is good for the life of the receiver-transmitter most of the time. That's why it's sealed.

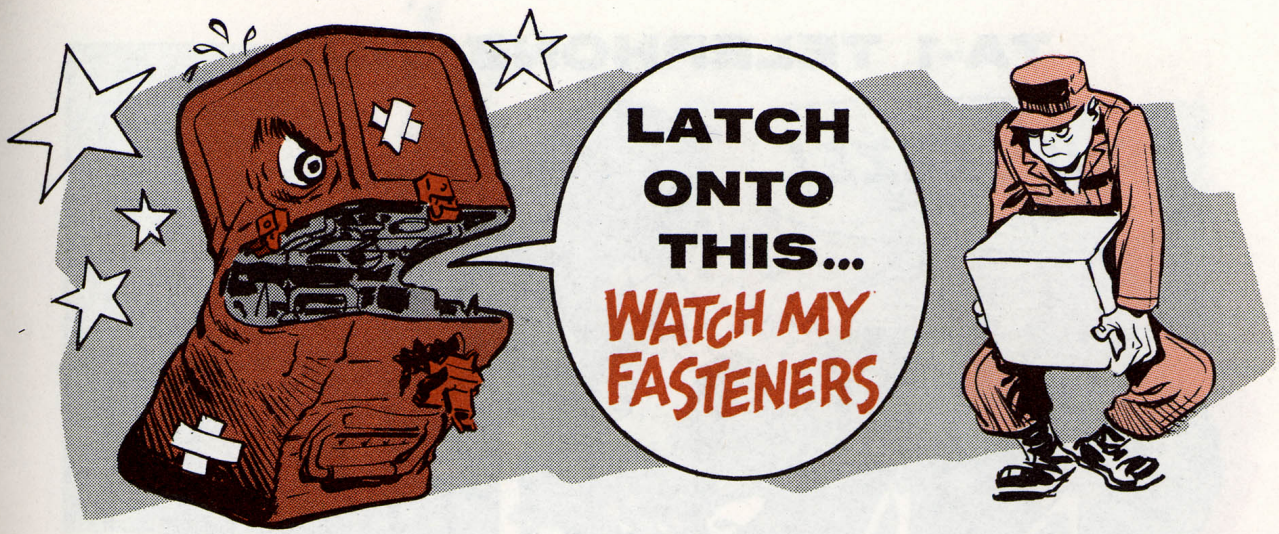
But along comes the Incapacitator. He turns the control, throws everything off frequency, and the set quits working. He can't figure what to do about it, naturally, so he leaves the whole mess in your hands. So you take the works to higher echelon and hope they can fix it up.

You'd like to brain this Joe, naturally, and your support would like to brain you on accountta they unjustly suspect you did it. They even go so far as to explain that the only time the C-65 is adjusted outside the factory is when major repairs are made to the transmitter circuits.

But while you're getting all this polite orientation, where's the Incapacitor? Why, he's off fiddlin' with somebody else's C-65 . . . to see how come yours went on the blink when he turned it.

Better start looking for him now. And when you find him, there're a couple dozen other guys who've been itching to meet up with him . . .





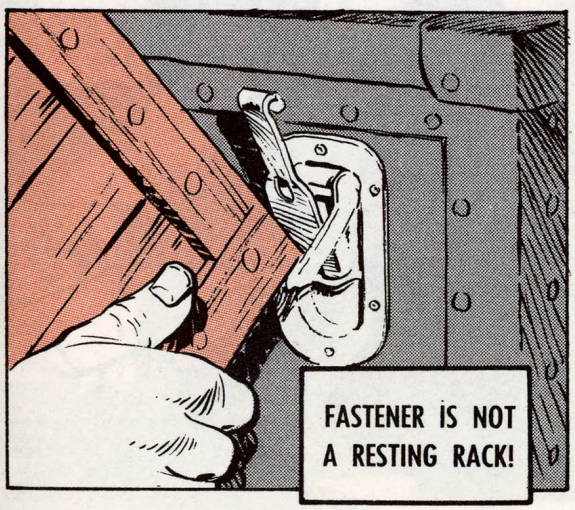
A flip, a push and a snap.

Repeat the process a few times and you get the comfortin' feeling that all the components of your AN/TPS-21 and -33 radar sets are secure and protected. Nice 'n snug in their cases, that's what they are.

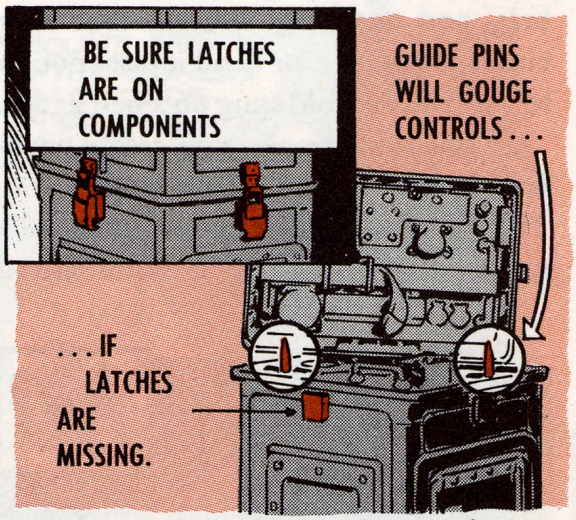
But how about when a coupla' snap fasteners are broken or missing? No flip. No push. No snap. No "all's well" feeling.

Ol' Mr. Damage is waiting for his chance, so make him go bother somebody else by keeping your fasteners in shape and where they belong.

Your first step is not to use the fasteners as a resting rack for the components you lift out of the cases. You might try a little caution, too, so you don't snare or snag 'em.



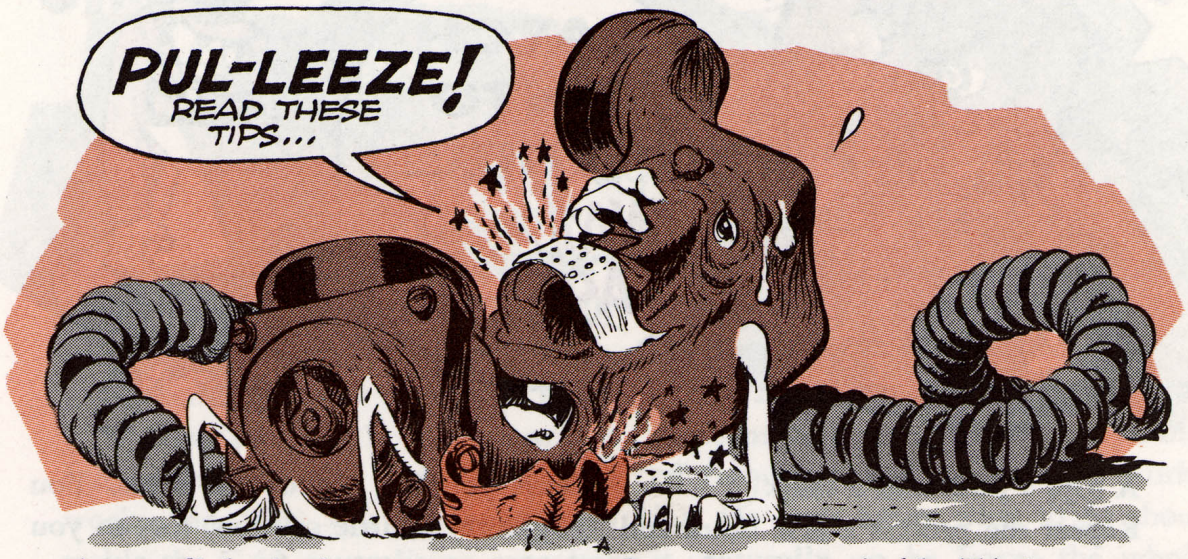
And maybe even more important, be extra careful with the fasteners that hold the components together for storage in the cases. Like with the frequency converter-transmitter and the control indicator.



If the fasteners on those jobs are missing, f'rinstance, the guide pins of the converter-transmitter can grind into the controls of the indicator and really foul up the works.

Which means the set's gonna be tied up for repairs when it could and should be out doing the job it was built to do.

TA-1 TELEPHONE TIPS



A second's hesitation can save you an hour's sweat with the belt clip on your TA-1/PT telephone.

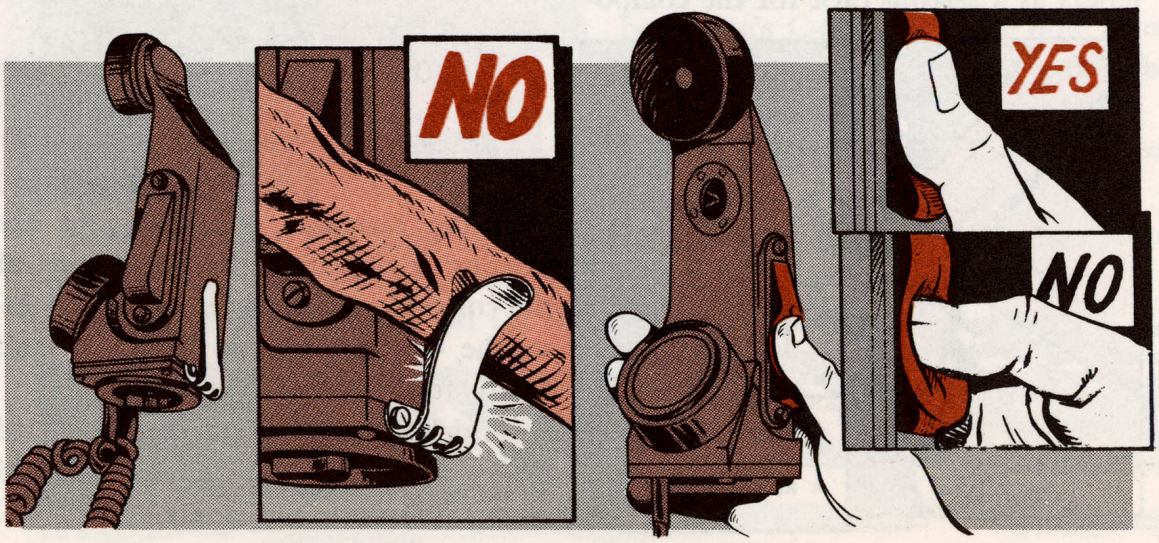
Remember that the next time you're tempted to force the clip over a tree branch or some other handy perch. The clip was made to slip over a narrow belt, and anything wider'n that may either break it . . . or bend it just enough so's it'll never hold snug on a belt again.

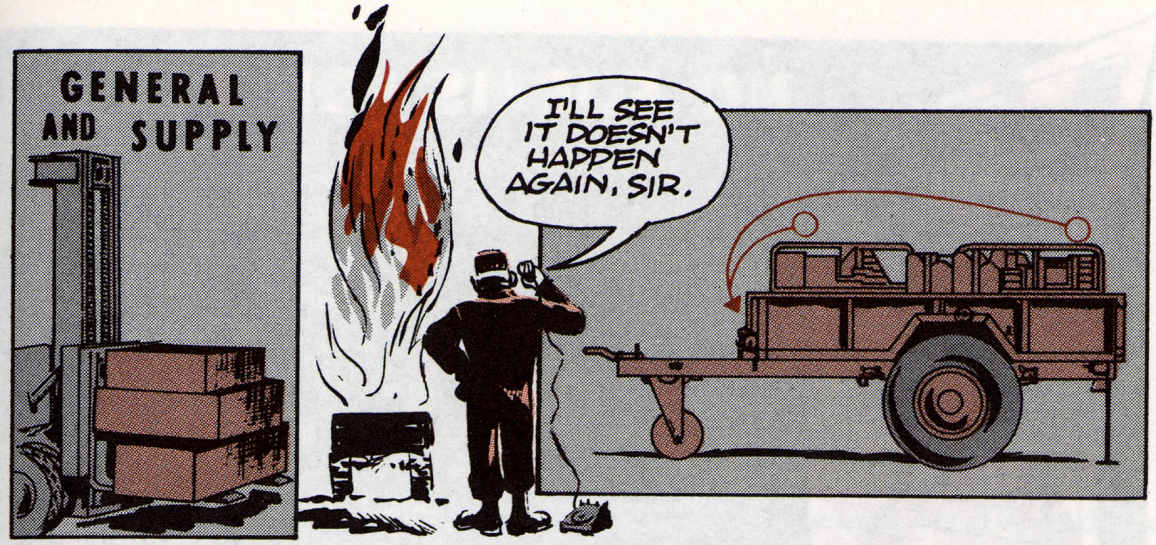
If you ruin the clip you create problems for some other people besides you. There's no way to get a new one, which means the clip's gotta be cannibalized from an unrepairable TA-1, or your support outfit has to make you a new one.

Another good way to keep your TA-1 away from the repairman is to keep your fingernails off the push-to-talk switch. That goes for when you're usin' the telephone.

Fingernails can cut up the rubber cover of the switch over a period of time and make the cover useless.

Best deal is to leave your fingerprints on the switch . . . by pushing it with the flat of your fingers.



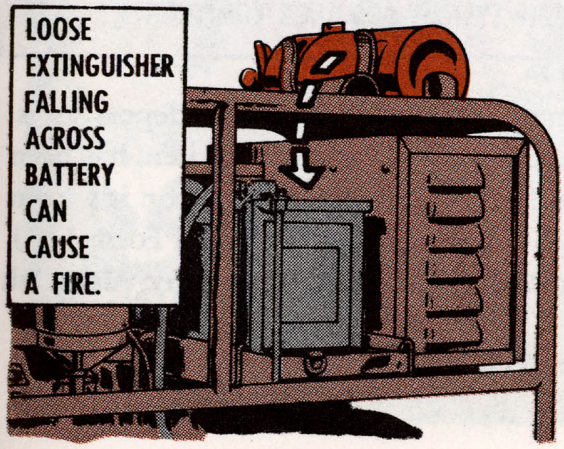


FIRE BY EXTINGUISHER

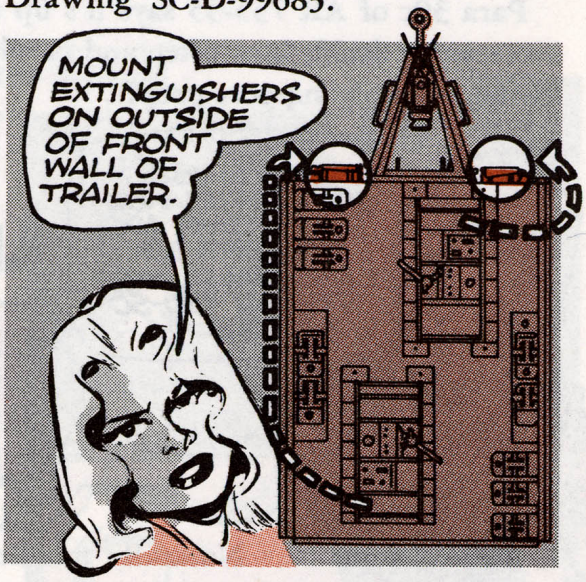
So you take a coupla PU-286 generator sets and place 'em in a 1½-ton trailer, add a few gasoline drums, and what have you got?

That's right, a PU-294/G generator set. But you've got something more. You've got ready mobility, man, and along with that you've got bounce, bumps and vibration.

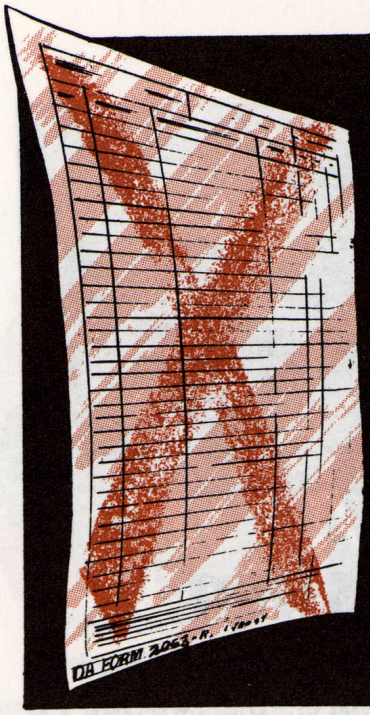
And this means the fire extinguishers can no longer remain mounted on top of the PU-286's, right near the batteries. Because the sad story is they've been known to shake loose and fall across the batteries, causing messy little fires. And this is a heck of a thing for a fire extinguisher to do.



When PU-286's are mounted to make a PU-294/G, the two fire extinguishers, CO_2 type, FSN 4210-223-9912, are supposed to be re-located on the outside of the front wall of the trailer, like it shows in Installation Drawing SC-D-99683.



TM 11-6115-223-15P (23 Nov 60) on the PU-294/G authorizes two support bracket assemblies, FSN 6115-606-9938, and two brackets, FSN 4210-351-4547 for the new position. The original brackets on the top of the control should be turned back to supply.



NO FORMS FOR PLL's

Dear Half-Mast,
Whatever happened to DA Form 2063R, the prescribed load list form? The latest AR 735-35 (16 Mar 62) doesn't even mention it. Can we still use it?

Sgt J. D. W.

c. Prescribed load lists will be provided supply activities in format and at times as prescribed by ZI installation commanders. Oversea commanders will issue instructions for preparation and use of prescribed load lists in their commands.

31. Revision of quantities of line items au-
thorized for operational stocks. The following

Dear Sergeant J. D. W.,

Negative! The reason AR 735-35 doesn't talk about it any more is because it ain't no mo' . . . the 2063R, that is. The Prescribed Load List is still required, but you now make up this listing in any way and any time you're asked to do so.

Para 30c of AR 735-35 says it's up to installation commanders, both ZI and overseas, to decide how often and in what way these PLL's will be put together for your supply support people.

Half-Mast

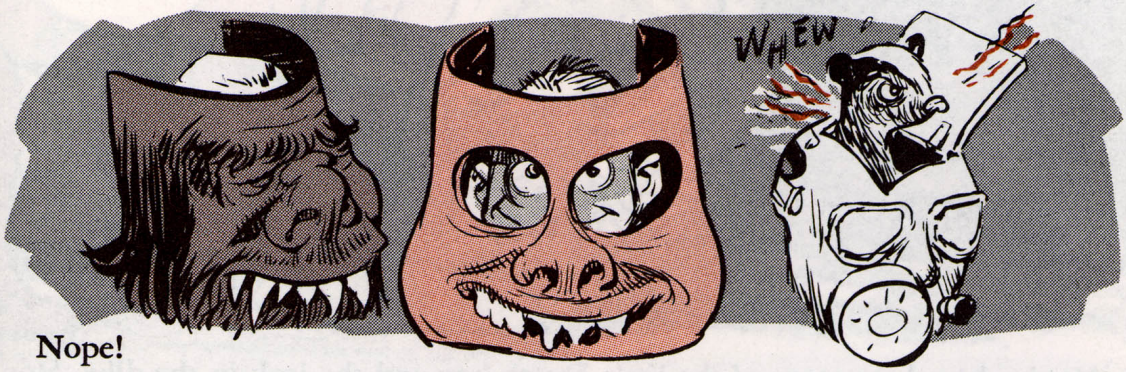
LET THESE BE . . .

1. AMMO AND ITS COMPONENTS.
2. SPECIAL WEAPONS MATERIEL AND ITS COMPONENTS.
3. MISSILE RELATED ITEMS.
4. MISSILE SYSTEMS AND THEIR COMPONENTS.

Normally missile materiel goes back to the depots as is. The only time it can be cannibalized is when an item has been tagged obsolete and OK'd for the scrap heap, or it's been declared uneconomically repairable (on Standard Form 120) **by the responsible activity of the U. S. Army Materiel Command.**

SB 9-182 (31 Jan 63), "Cannibalization of Ordnance Materiel" says so.

A MASK IS A MASK . . . ?



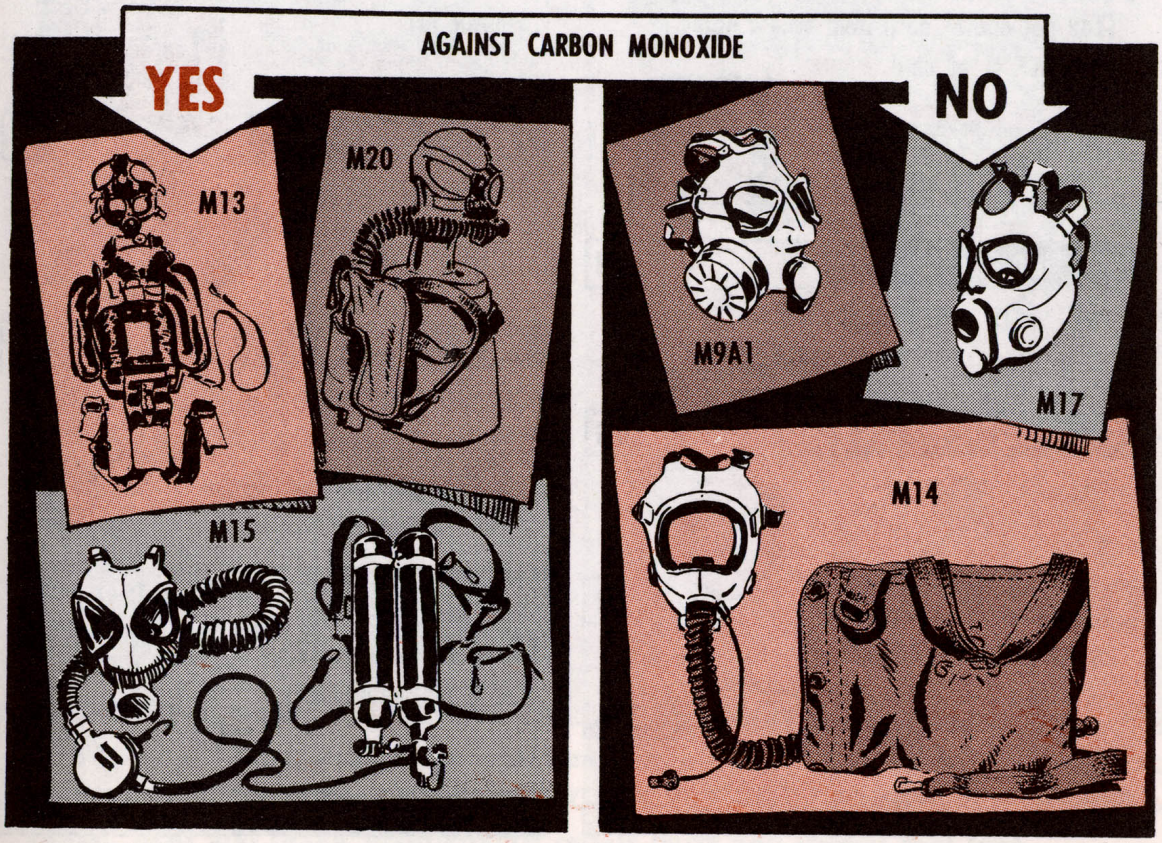
Nope!

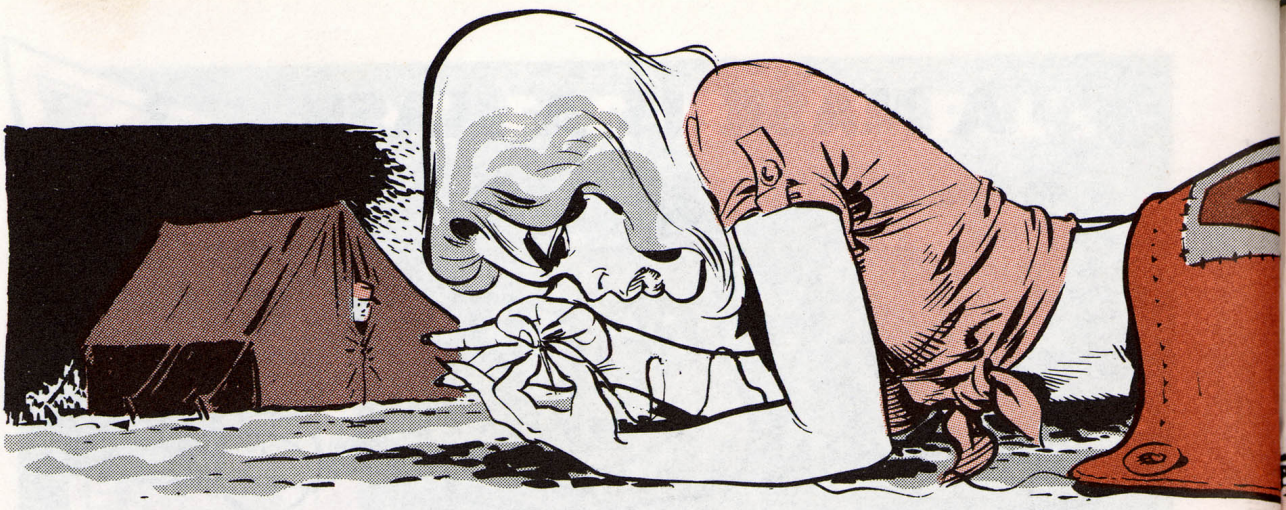
There are masks and there are masks, and it's smart to know the difference.

For example, "ventilate or wear a gas mask" is the caution you often see or hear where there's danger of carbon monoxide.

What you gotta know is that the caution isn't talking about the ordinary field protective mask. Carbon monoxide is dangerous in confined areas where there's not enough oxygen, and the breathing apparatus to use is the M13 or the M20 oxygen generating breathing apparatus, or the M15 compressed air breathing apparatus.

The field masks M17 and M9A1, also the M14-series tank protective masks, for example, which are usually handy **don't,** repeat **don't,** provide protection against carbon monoxide.





You've heard the story of the little Dutch boy and the leak in the dike. How he became a hero by keeping his finger in the leak until help arrived.

A tent with a hole in it won't cause a flood in rainy weather, but it can make the tent mighty uncomfortable and ruin equipment. The solution to the problem's not to plug the hole with your finger. You'd best give it that "stitch-in-time" before trouble sets in.

So, give your tent the once-over before it's time to pitch it. When you do find small holes or tears you can usually patch them yourself. Ask your supply sergeant about

TENTAGE REPAIR KIT, FSN 8340-262-5767

Here's what you find in it.
(You get one of each item unless noted.)

ADHESIVE (1 pt can)

FSN 8040-266-0850	6	QM

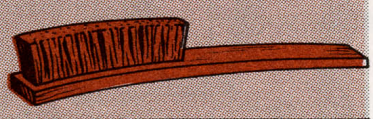
AWL, SADDLER'S SEWING

FSN 5120-257-5541		QM

BEESWAX, TECHNICAL

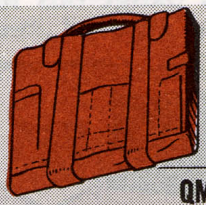
FSN 9160-253-1173		QM

BRUSH, WIRE, SCRATCH



FSN 7920-285-2782		QM

CASE, TENTAGE REPAIR KIT

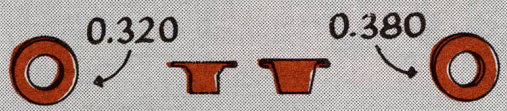


FSN 8340-270-1334		QM

CLOTH, COTTON, DUCK

FSN 8305-170-3903	5 yd.	QM

GROMMET, METALLIC



FSN 5325-231-6622	No. 4	75 ea	ORD
FSN 5325-231-6623	No. 5	75 ea	ORD

HAFT, SADDLER'S AWL

FSN 5120-299-8430		QM

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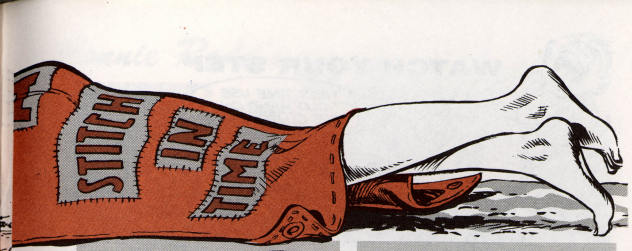
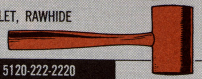


MALLET, RAWHIDE



FSN 5120-222-2220		QM

NEEDLE, SADDLER'S SEWING AWL

FSN 5120-516-4230		QM

NEEDLE, SAILMAKER'S

FSN 8315-163-1549		QM

PALM, SEWING

FSN 5120-162-7447		QM

PATCH, TENT

FSN 8340-241-8187	3-in dia	150 ea	QM
FSN 8340-241-8188	4⅜-in dia	50 ea	QM
FSN 8340-241-8189	6¼-in dia	35 ea	QM

PUNCH AND DIE, GROMMET INSERTING

FSN 5120-221-1150	No. 4	QM
FSN 5120-221-1151	No. 5	QM

RING, CONNECTING, ROUND

FSN 5340-264-1221	½-in, id	50 ea	QM
FSN 5340-264-1222	¾-in, id	25 ea	QM
FSN 5340-264-1219	1-in, id	10 ea	QM

SHEARS, BENT TRIMMERS

FSN 5110-161-6918		QM

SLING, CARRYING, BAG AND CASE

FSN 8465-269-0682		QM

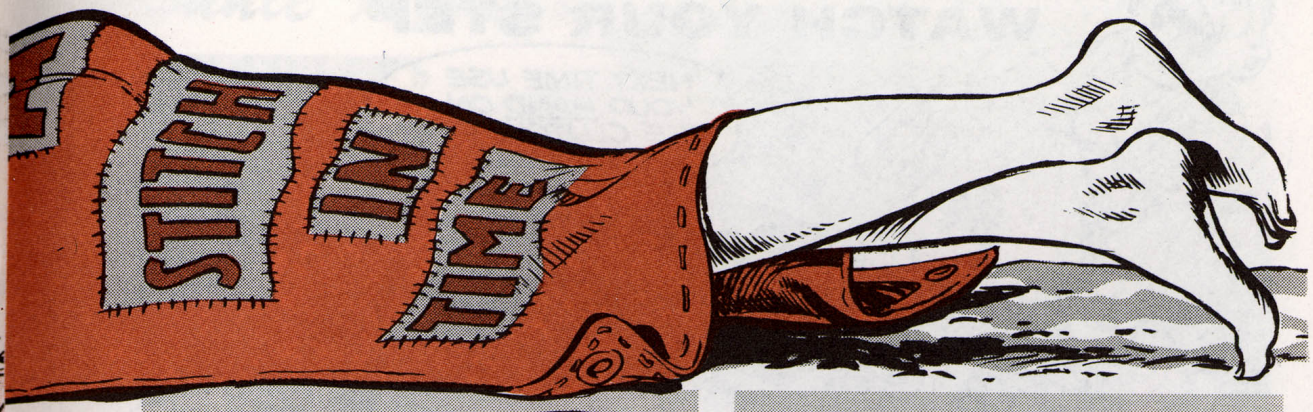
SLIP, TENT LINE

FSN 8340-223-8094	10 ea	QM

THREAD, COTTON

FSN 8310-197-7686		QM

If you have Tent, Frametype, Maintenance, Medium Light Metal, Cotton Duck, then you'll want a copy of TM 10-8340-207-25P (Apr 62) that lists its organizational, field and depot maintenance repair parts and special tool lists.



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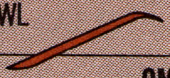

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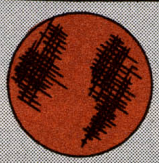

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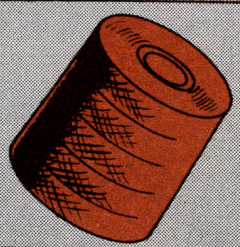

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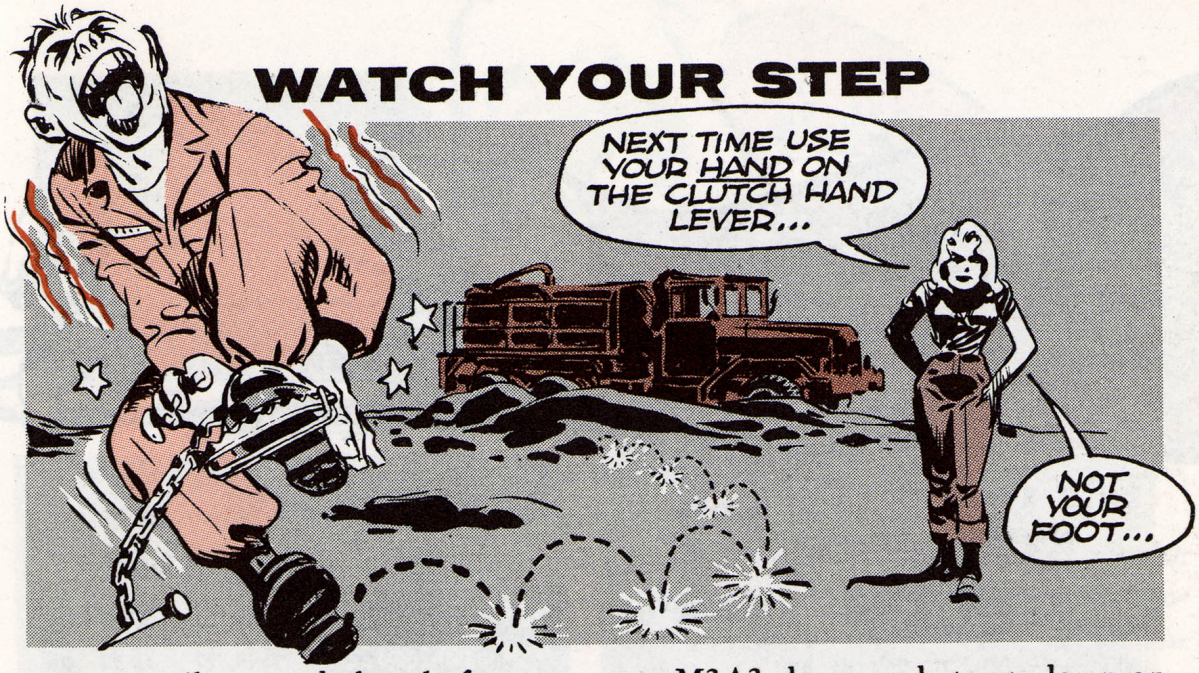
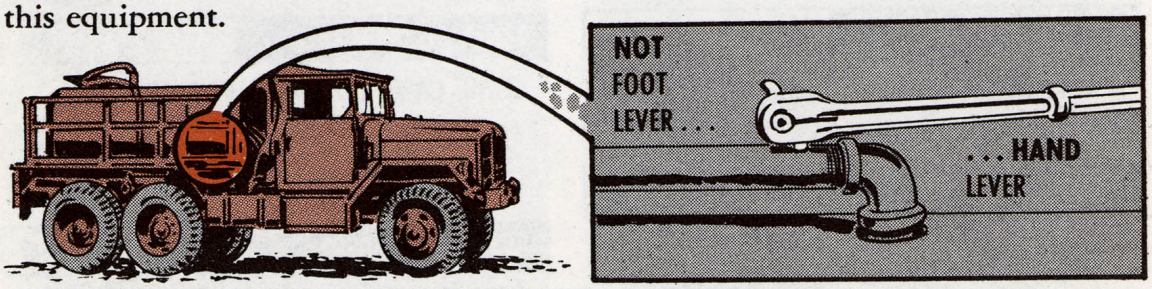
WATCH YOUR STEP



Ever walk around the platform on your M3A3 decon and stomp down on the clutch hand lever with your clodhoppers?

Or instead of using your hand to engage the clutch, you step on the clutch hand lever?

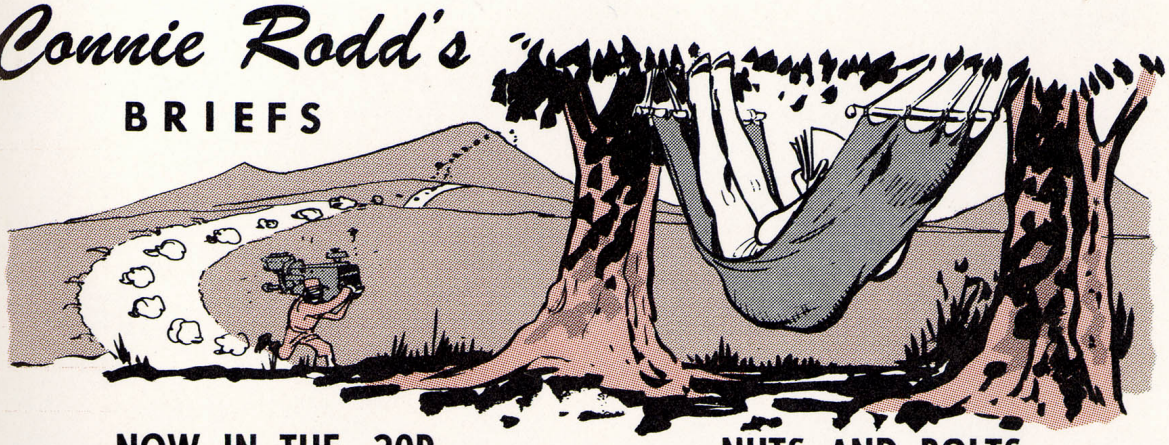
What you didn't know or didn't think about is the damage you're doing to this equipment.



When too much pressure's put on that clutch hand lever, something's got to give, and you can bet it'll be the clutch yoke. When that yoke's bent out of shape, your decon's out of commission.

So please . . . keep your feet off that lever. Might try putting a piece of tape (something bright—red or yellow) on the clutch hand lever to remind others not to step on it.

Connie Rodd's BRIEFS



NOW IN THE -20P

You can stop fighting the problem of trying to come by the hydraulic pump drive belt, FSN 2590-777-3126, that's used in your Hawk loader. It wasn't listed in TM 9-2300-223-20P (Mar 62) as an authorized repair part for stockage. But it is in the latest TM 9-2300-223-20P (28 Nov 62) with an allowance of one per 1-5 vehicles. The belt is also listed as a combat essential item.

STAKE IT

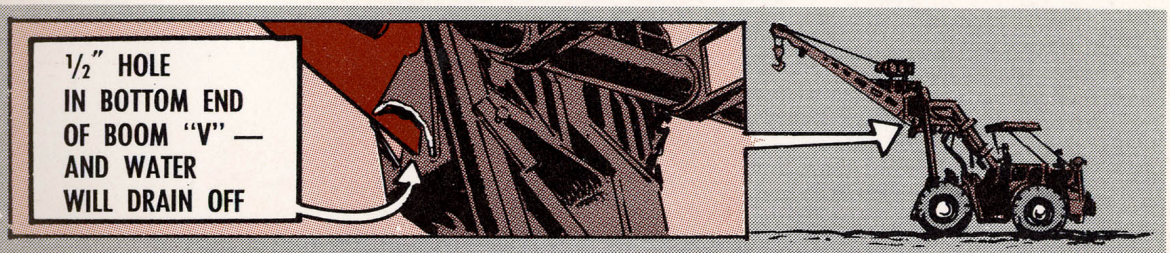
Here's a sure-fire way to keep from losing the spring plunger and plunger retaining pin from the M76 grenade launcher on your M14 rifle. Take a center punch and tap a couple times around the pin hole on both sides of the tube. Push the metal in toward the pin. This'll do the trick.

NUTS AND BOLTS

'Fore you start yellin' that you've been short-changed, better take a second look. That Hardware Kit, Shop Set Installation, FSN 5340-682-1963, that's listed in your SM 9-4-5180-A20 (Feb 62), is not really a part of your No. 2 Common tool kit. It's listed there so you'll know what to order in case you're going to install your tool kit in a 2½-ton truck and a 1½-ton 2-wheel cargo trailer.

PARK THE SHORTS

An adapter for the M11 small arms storage rack (FSN 1095-897-8755) will provide parking space for the M1 and M2 carbines. You can get the adapter through your support unit per TB 9-1095-200-30/1, (8 Mar 63), along with TM 9-1095-200-15P.

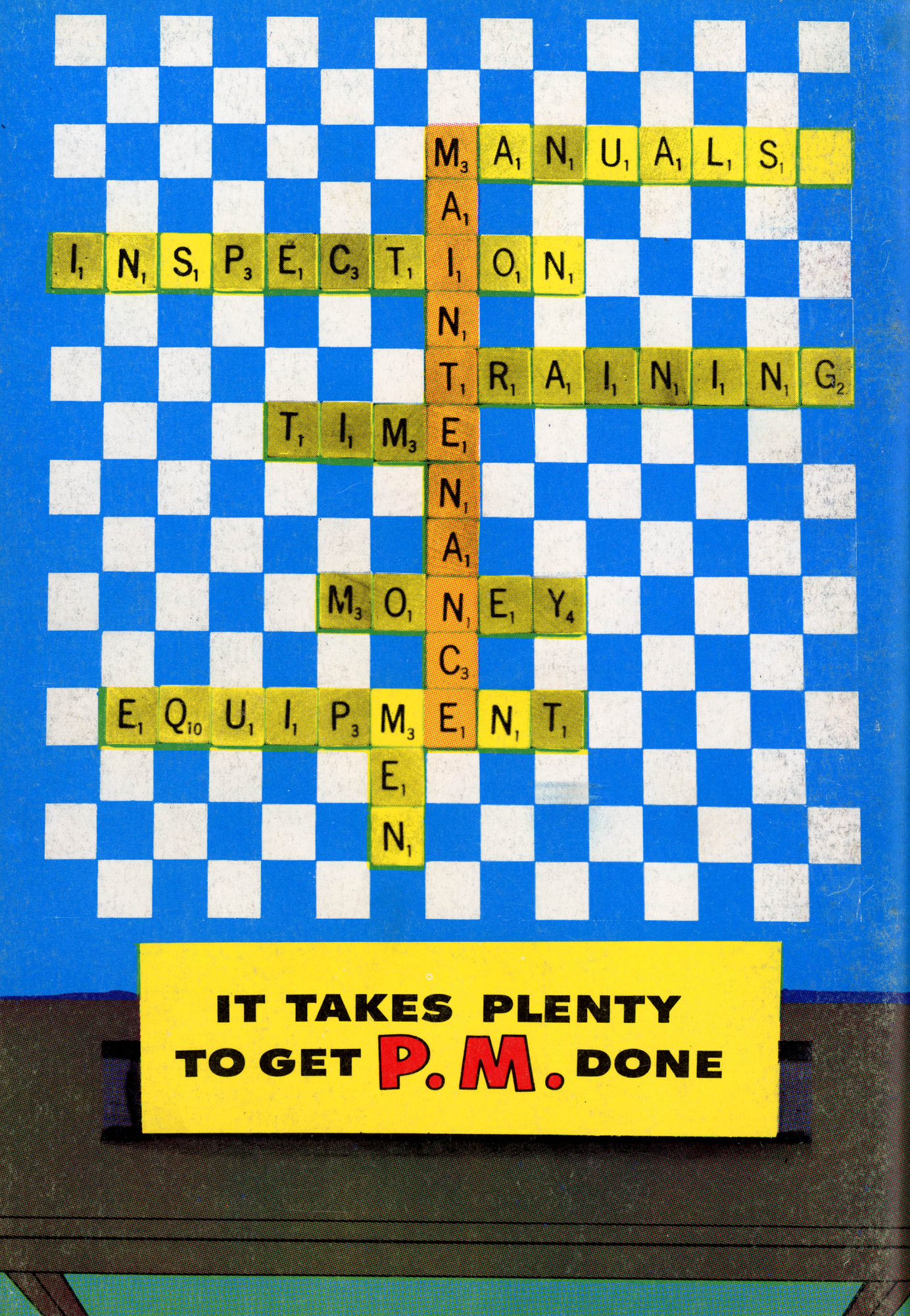


DRILL THE "V"

No need for a surprise shower every time you move the crane attachment of your 10,000-lb rough terrain forklift truck after a rainstorm.

Just drill a ½-in hole in the boom "V" and let the water drain off.

Would You Stake Your Life right now on the Condition of Your Equipment?


MANUALS
INSPECTION
MAINTENANCE
TRAINING
TIME
MONEY
EQUIPMENT
IT TAKES PLENTY
TO GET P.M. DONE